

REPORT
ON THE
LAND REVENUE SETTLEMENT
OF THE
MUZAFFARGARH DISTRICT
OF THE
PUNJAB,

BY
EDWARD O'BRIEN, Esquire,
SETTLEMENT OFFICER.

1873-80.



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W. WALLACE, MANAGER.

PART I.

TABLE OF CONTENTS.

	Page to Page
Index of Contents	1 " 1
Report—Chapter I.—Physical Geography	1 " 44
Do. do. II.—History	45 " 54
Do. do. III.—Population, houses, food and clothing.....	55 " 62
Do. do. IV.—Religion, shrines, superstitions, amusements and language	63 " 73
Do. do. V.—Agriculture and other industries	74 " 82
Do. do. VI.—Former Revenue systems, Tenures, past and present division of crop	83 " 95
Do. do. VII.—The Settlement	96 " 116

INDEX

Para.	SUBJECT	Page
CHAPTER I.—PHYSICAL GEOGRAPHY.		
1	Situation, Dimensions and boundaries	1
2	The Thal	<i>ib</i>
3	The country outside the Thal	2
4	The Canal tract	3
5	Administrative divisions	4
6	The Rivers. The Indus	<i>ib</i>
7	The Chenab	6
8	Difference in the slope of the Indus and Chenab.....	<i>ib</i>
9	Features common to both rivers. Boats.....	<i>ib</i>
10	Alluvial Deposit. Kálá páni	<i>ib</i>
11	Rivers—the remarkable feature of the District	7
12	The Dhands or backwaters	8
13	Artificial Irrigation	11
	Wells	<i>ib</i>
	Canals	12
14	Canals	<i>ib</i>
15	History and description of the canals	<i>ib</i>
16	Chenab Canals.....	13
17	Indus Canals	15
18	Protective embankments	22
19	Requirements of the District for protection from floods	23
20	The Chenab Bands	<i>ib</i>
21	The Khairpur Band	24
22	Government Rakhs.....	<i>ib</i>
23	Climate, rainfall, health	<i>ib</i>
24	Metals and minerals	26
25	Soils	<i>ib</i>
26	Vegetation, trees	27
27	Date palms	30
28	Fodder plants	32
29	Plants other than fodder plants	33
30	Fauna domestic animals	34
31	Wild animals	36
32	Birds	<i>ib</i>
33	Game birds	38
34	Fish	39
35	Reptiles	41
36	Communications, roads	43
37	Ferries	44
38	Bridges	<i>ib</i>
39	Rest-houses and saráis	<i>ib</i>
40	Saráis	<i>ib</i>
41	Towns	<i>ib</i>
CHAPTER II.—HISTORY.		
1	Introductory	45
2	The Hindu dynasties	<i>ib</i>
3	The Arab conquerors	<i>ib</i>
	The Sumras	<i>ib</i>
	The Summas.....	<i>ib</i>

Para.	SUBJECT	Page
4	The Langah dynasty of Mooltan	46
5	Divisions of the district into four Governments	ib
6	The first Government, Sitpur	ib
7	The Nawábs of Baháwalpur take Sitpur	47
8	The second Government, Dera Gházi Khan.....	48
9	The third Government, Mooltan.....	49
10	The fourth Government, The Thal Nawábs.....	50
11	Union of the four Governments.....	ib
12	The united Government under Sáwan Mal.....	51
13	Diwán Mulráj.....	53
14	The district under British rule	ib
CHAPTER III.—POPULATION, HOUSES, FOOD AND CLOTHING.		
1	Population with accounts of the chief tribes	54
2	Játs	ib
3	The Biluchies	56
4	Syáds	ib
5	Patháns	57
6	Jhabels, Kihals, Mors	ib
7	Kutánás	ib
8	The Kureshi family	ib
9	Hindu tribes	58
10	Labánás	60
11	Brahmans	ib
12	Area of land owned by each tribe.....	ib
13	Houses, food and clothing	61
14	Food	62
15	Clothing	ib
CHAPTER IV.—RELIGION, SHRINES, SUPERSTITIONS, AMUSEMENTS, LANGUAGE.		
1	Religion	63
2	Shrines	64
	Diara Din panáh	ib
3	Daud Jahániá	65
4	Alam Pír	ib
5	Other shrines	66
6	Lingri Pír.—The Rag Saint	67
7	Muhammadan ceremonies	ib
8	Ceremonies at births.....	ib
9	Chand laháwan	ib
10	Circumcision	68
11	Ceremonies connected with marriages	ib
12	Which ceremony is conclusive evidence of betrothal and of marriage	70
13	Ceremonies connected with deaths	ib
14	Hindu ceremonies	71
15	Amusements	ib
16	Language	72
17	Literature	73
18	General character of the people	ib
CHAPTER V.—AGRICULTURE AND OTHER INDUSTRIES.		
1	Division of the district in regard to agricultural operations	74
2	Rotation of crops and fallows	ib

Para.	SUBJECT	Page
3	Manures	75
4	Farm servants and labourers	ib
5	Agricultural Instruments	ib
6	Principal crops and area under each	76
7	Kharif crops—Cotton	ib
8	Indigo	ib
9	Jowár	77
10	Bajra	ib
11	Rice	ib
12	Sugarcane	78
13	Moth	79
14	Til	ib
15	Samuka	ib
16	Rabbi Crops—Wheat.....	ib
17	Kinds of wheat grown	80
18	Amount of seed and outturn	ib
19	Barley	ib
20	Peas	ib
21	Gram	81
22	Turnips	ib
23	Other crops of the Brassica order	ib
24	Mohri.....	82
25	Other Rabbi Crops	ib
	Other Industries.....	ib
	Fishing	ib
CHAPTER VI.—FORMER REVENUE SYSTEMS. TENURES, PAST AND PRESENT. DIVISION OF CROP.		
1	The Thal Nawábs' Revenue system	83
2	Revenue system of the Baháwalpur Nawábs	ib
3	Sáwan Mal's Revenue system.....	ib
4	The difficulty of describing it	ib
5	Two classes of Revenue payers	84
	Páttadárs	ib
6	Bhaoli	85
7	Cesses	86
8	Personal interference and rights of individuals secured.....	87
9	Non-agricultural cesses	ib
10	Revenue from fisheries	88
11	Town and transit duties	ib
12	Revenue from trees, especially dates	ib
13	Changes of administration on annexation.....	ib
14	The first Summary Settlement	89
15	The second Summary Settlement	90
16	The third Summary Settlement	ib
17	Tenures—Superior proprietors	91
18	The Multáni Patháns	92
19	Inferior Proprietors	93
20	Inferior Proprietors classified	94
21	Tenants. Mundhimar tenants. Butimar tenants	ib
22	Exceptional forms of agricultural status ..	95
	Mahsulkhori	ib
	Lichhain	ib
	Anwahuda	ib
	Lichh	96
	Lekha Mukhi Mortgages	ib

Para.	SUBJECT	Page
CHAPTER VII.—THE SETTLEMENT.		
1	Sketch of Settlement operations.....	96
2	The measurements and their results	97
3	Rakh demarcation	98
4	Record of right in rakhs under the Forest Department	99
5	Effects of the demarcation of rakhs on Tirni Revenue	ib
6	Rakhs under the Forest Department.....	ib
7	Canal Administration, past and present	100
8	Canal Administration under British Rule.....	ib
9	Arrangement for the future management of the Canals	102
10	Canal records	103
11	Land-revenue	ib
12	Zaildars	104
13	Patwaries and Kanungos.....	105
	Native place of Patwaries.....	106
14	Record of rights	ib
15	The administration paper	107
16	Records of general customs	ib
17	Cesses	108
18	Term of Settlement.....	ib
19	Dates of instalments	ib
20	Cost of settlement ..	ib
21	The assessment	ib
22	Tenants.....	ib
23	Prices.....	110
24	Increase in cultivation	ib
25	Jama of the district before the new assessments.....	111
26	Assessment Circles	ib
27	Produce estimate jama	112
28	Assessment rates adopted.....	ib
29	Fluctuating assessments in the Bet circles	114
30	Produce jama, revenue rate jama, and assessed jama compared....	ib
31	Assessment on grazing lands	115
32	Assessment on date trees.....	ib
33	Final results of the Settlement.	ib
34	Land-revenue assignments	116
35	Working of the fluctuating assessment	ib

From—F. C. CHANNING, Esquire, Senior Secretary to Financial Commissioner, Punjab,
To—The Secretary to Government, Punjab.

I AM directed to submit, for the orders of His Honor the Lieutenant-Governor, the final report on the settlement of the Muzaffargarh District by Mr. O'Brien, with a review by the Commissioner of Settlements and Agriculture, contained in that Officer's letter No. 340, dated 2nd December 1882. A copy of the Settlement Atlas is also submitted.

Submits the final settlement report of the Muzaffargarh District.

2. The first five chapters of Mr. O'Brien's report are full of varied and curious information as to the district and its inhabitants, but they do not call for any detailed notice here. The district is unique in the Punjab. With the exception of the triangle of the Thal which is let into the north of the district, the country resembles more nearly the Egyptian Delta than anything found in the rest of the Province. It has owed its origin to the rivers, and its alluvial formation, apparently of comparatively recent origin, is witnessed to by the fact stated on page 26 of the report, that every soil is underlaid with sand at greater or less depth. Floods from the rivers, still annually sweep over much of the district, and, while conferring great benefits by the rich deposits of silt left when they subside, and which carry on the process of construction, sometimes turn their beneficent into destructive action. Many embankments exist to regulate and check the floods, and still more are required; while, on the other hand, some 200,000 acres of land are irrigated from canals, which lead the flood-waters of the Indus into tracts either situated beyond the reach, or protected from the action of the natural inundation. In paragraph 19 of Chapter I, Mr. O'Brien states his views as to what is still required for the completion of the arrangements both for irrigation and for protection from floods; and the Officiating Financial Commissioner hopes that gradually it may be found possible to carry out the works there sketched out. The rain-fall is small and insufficient to bring crops to maturity, so that cultivation is only possible when some form of irrigation can be procured. At present only some 23 per cent. of the district is under cultivation. The climate and the flood irrigation seem to be especially suited to the growth of the date palm; over 400,000 female date palms exist; the

fruit is a very important item in the food of the population, and more especially of the poorer classes, and the assessment on the trees yields a respectable amount of revenue to the Government. A very full account of the tree, which is the source of this revenue, will be found in paragraph 27 of Chapter I. of the Settlement Officer's report.

3. The district is very thinly populated, having only 98 persons to the square mile. The population is mainly Muhammadan and rural, and is composed largely of Jats and Biluchis. According to the census of 1881, the total number of the inhabitants is 338,605; and of these only 21,856 belong to the towns; there are no towns with more than 5,000 inhabitants, and only six with over 3,000 inhabitants. Muhammadans number 292,476. The general character of the people, as described by Mr. O'Brien in paragraph 18, Chapter IV of his report, is not prepossessing. It seems a general rule in the Punjab that in industry and thrift Muhammadans are inferior to Hindús, and populations which inhabit tracts near the rivers, to those which occupy the higher lands, and particularly those tracts in which the cultivation is largely dependent on well irrigation. The cause of this difference is not far to seek. It lies in the varying degrees of exertion required to obtain from the soil the means of support. Where, as in the Manjha, the conditions are such as to necessitate great and constant labor on the part of the agricultural population, their habits of industry and thrift are formed, and the character generally is strengthened; but where, as in the Sailáb tracts, these conditions are wanting, there the population is generally found to be lazy and improvident.

4. A full and interesting account of the agriculture of the district is given by Mr. O'Brien in Chapter V of his report, from which it appears that 70 per cent. of the whole area under cultivation is sown with rabbi crops, of which more than three-fourths is wheat; and that of the kharif harvest, the staple crops are cotton, indigo, jowár, bajra and rice. Sugar-cane is also grown to some extent in the neighbourhood of towns.

Mr. O'Brien's remarks on the present state of the indigo manufacture in paragraph 8 of this chapter deserve the careful attention of the Deputy Commissioner and of the Commissioner of Agriculture; and efforts should be made to

induce the people to exercise greater care in the preparation of the dye.

5. The Settlement Officer's description of Sáwan Mal's Previous revenue ad- revenue system will be read with ministraton. interest: it may perhaps be shortly characterised as the highest possible development of the oriental theory of revenue administration, under which the producers are allowed to retain only so much of the produce as is absolutely necessary for their support, and what is not required for this purpose is appropriated by the State. One peculiarity of the Diwán's system was, that while making no change in the old established rate at which the *mahsul* or State share of the produce had been taken, he gradually raised the revenue by the imposition of a variety of cesses whenever circumstances justified the enhancement, and by this process he equalized the pressure of the demand. Another distinctive feature of his system, as described by Mr. O'Brien, was the extent of direct official interference which it involved. The State, while exacting its own full share of the produce, took care that all who were in any way connected with the land should receive their share also. This doubtless contributed to its success, and secured for it a degree of popularity which a system so essentially oppressive could not otherwise have obtained. The whole of the date crop was taken by the Government, which indeed arrogated to itself rights of ownership over all trees. Tolls, taxes on artizans, camels, female buffaloes, sheep and goats, and also transit and town duties, were further sources of revenue. But although the people were thus deprived of all surplus income, they were at the same time afforded all the assistance which they required in order to carry on production. They were treated and managed like children, and hence, when on the introduction of British rule the Government support was withdrawn, and they were left to manage their own affairs, they were at first hardly capable of doing this even though their burdens had been very materially lightened. The history of our revenue administration in this district as given by the Settlement Officer in paragraphs 14 and 15, is not one that can be looked back upon with any satisfaction. The first summary settlement, though moderate on the whole was unequal in its incidence owing to the indiscriminate remission of cesses which, as explained above, had served to equalize the revenue, and in consequence of the great fall in prices which followed soon after, it completely broke down.

Again, when it was revised a few years after, the demand in two tahsils was unfortunately increased owing to the season being unusually favorable.

This new settlement broke down almost at once, and was followed in 1860 by a third summary settlement, by which the demand was very materially lightened. This was the last of the summary settlements, and it would, Mr. O'Brien thinks, have worked well had proper attention been paid to the annual clearance and repairs of the canals, and to the effect of the rivers on the lands subject to their action.

6. The existing tenures have their origin in the former revenue administration. Broadly speaking, the interests in the land subordinate to those of Government are—

1. Those of the superior proprietor with a title usually based on bare original possession.

2. Those of the inferior proprietor, whose titles rest on cultivation and expenditure of capital, and are based on permission to settle and cultivate waste land given either by the superior proprietors or by the Government, but chiefly by the latter, which looked only to the increase of its revenue, and with this object claimed a right to dispose of waste lands as it pleased.

3. Those of the tenants whose rights differ in strength according as they were the original clearers of the waste or not. The control of the cultivated lands now ordinarily belongs to the inferior proprietors; that of the waste to the superior proprietors. The rights of each class are based on the system of division from the grain heap, which existed under Native rule; and the share known as *mahsûl*, formerly taken by the Government, is now the right of the person, generally the inferior proprietor, who pays the Government revenue: the distinction of superior and inferior proprietor has, however, to a great extent, disappeared under our rule, except in the Sanawan Tahsil. There are other varieties of tenures, described by Mr. O'Brien in his Chapter VI.; but it will be observed that the forms into which they tend to fall are moulded on the above types, and have reference to the corresponding partition of the grain heap. As in most districts of the Mooltan Division, the villages are mere groups of wells, devoid of any real connection.

7. Chapter VII. of the Report, which professes to describe the settlement, hardly contains such an account of the work performed during the operations known by this comprehensive term as is required by rules under the Land Revenue Acts CV. The brevity of this part of Mr. O'Brien's report is out of proportion to the fulness of the earlier parts; the account of the assessment is specially meagre, although the rule on the subject distinctly states that such portions of the assessment reports as are likely to be useful for future reference shall be incorporated in the final report.

8. The cost of the settlement operations, which lasted about seven years, is stated at :—

				Rs.
From Imperial Funds	...	...	...	3,97,450
„ Settlement fees	...	...	...	2,74,318
			TOTAL	6,71,768

And the result of the re-assessment is given by Mr. O'Brien as follows :—

		Old Revenue	New Revenue.
		Rs.	Rs.
Land Revenue	...	5,04,970	5,24,468
Grazing	...	34,623	33,388
Dates	...	11,503	19,226
		<hr/>	<hr/>
	TOTAL	5,51,096	5,77,082

Adding to the new revenue the amount for which the Government rakhis are leased, the Settlement Officer states the result of the settlement to be an increase of Rs. 32,986, or about 6 per cent.; owing to the very large amount of the jama which is fluctuating, the total demand under the new settlement will of course constantly vary.

9. The settlement operation included the formation of a record of rights and the re-assessment of the district. The marked features of the settlement were—

(I).—The revision of the rakh demarcation.

(II).—The placing the riverain tracts under a fluctuating system of assessment.

(III).—The arrangements made for the future management of the canals and the more complete organisation of the *chher* system.

(IV).—The arrangements made for the future relief of estates in case of the failure of canal irrigation.

The changes of system made under these headings will now be briefly referred to in the above order.

10. The revision of the rakh demarcations which had been made on paper in 1861, and on the ground in 1869, resulted in a diminution of the rakh area from over 970,000 to 311,554 acres. The areas which were restored to the people have been included in the village estates, and assessed at a demand fixed for the term of settlement; the grazing in the rakhs which have been retained is let on lease, and rules under Section 48 of the Punjab Laws Act for the management of the rakhs under the Deputy Commissioner were published in the *Punjab Gazette* of 30th March 1882, and these rules again have been supplemented by administrative instructions which were published in this office Circular 22 of 25th April 1882. The change from the old system under which the payments of the villages for grazing depended upon the accident of the village containing land which had been demarcated as rakh, to the present system under which each village is in the first place assessed according to the grazing land which it possesses, and only pays an addition to this assessment, if it actually sends its cattle to the Government rakhs, cannot fail to be beneficial; and according to the table before given, the grazing revenue, including the income from leasing the rakhs, is now greater than under the old arrangements.

11. The necessity for placing the riverain lands under some system of fluctuating assessment, and the character of the system which has been introduced, are clearly explained in paragraphs 7 and 8 of the Settlement Commissioner's review. Briefly stated, the necessity for the system arises from the fact that in these tracts the ability of the cultivator to crop the land depends not on his own will, but on the capricious action of the two mighty rivers, which wash the sides of the district; and the system introduced is one in which the land cultivated each year is

assessed at rates which vary according to the nature and the mode of irrigation. On the Chenáb, above its junction with the Sutlej, the wells have a fixed assessment; but throughout the rest of the district the whole of the tract subject to the action of the rivers is annually re-assessed. The assessments when made are sanctioned by the Commissioner, and then reported to this office, where the statements are examined and the results recorded in a register. The results so recorded for the three years 1879-80, 1880-81 and 1881-82 are as follows :—

TAHSIL.	Year of measurement.	JAMA OF FLUCTUATING REVENUE.					
		On grazing lands.	On cultivation.	Abiana.	On Date trees.	Total.	
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Muzaffargarh ...	1879-80	2,752	31,724	1,521	299	35,363	933
Alipur ...	"	10,551	58,864	8,771	2,296	80,345	137
Sinánwán ...	"	2,641	23,628	3,558	381	30,208	...
District Total ...	...	15,944	1,14,216	13,850	2,976	1,45,916	1,070
Muzaffargarh ...	1880-81	3,022	34,922	1,749	333	38,902	1,124
Alipur ...	"	10,353	60,427	8,114	2,672	81,429	137
Sinánwán ...	"	3,540	19,254	4,033	381	27,208	...
District Total ...	...	16,915	1,14,603	13,896	3,386	1,47,539	1,261
Muzaffargarh ...	1881-82	3,271	38,669	2,131	320	43,261	1,130
Alipur ...	"	10,537	63,820	8,292	2,671	85,125	195
Sinánwán ...	"	3,457	22,179	4,771	381	30,753	35
District Total ...	...	17,265	1,24,668	15,194	3,372	1,59,139	1,360

The results of the system, it will be seen, are financially favorable, and the system is reported to be popular among the people. But, as Mr. O'Brien pointed out in his Revenue Report for 1881-82, it entails extremely heavy work on the Tahsildárs; these at present are efficient, but one inefficient man would do much towards ruining the settlement. The Kánúngo establishment has recently been temporarily strengthened in order to facilitate the necessary supervision of the annual measurement, and the Commissioner of Settlements and Agriculture will shortly submit proposals for the permanent revision of this establishment.

12. The main principles of the assessment of the lands dependent on canal irrigation have been—
The assessment of the canal irrigated lands.

- (i).—To give a fixed assessment to all lands irrigated from canals at the time of settlement.
- (ii).—To arrange for due remissions of part or of the whole of this demand in case of the failure of canal irrigation.
- (iii).—To provide for the levy of a light acreage rate fixed at six annas in Sinánwán and at eight annas on the other two tahsils where canal irrigation is extended to wells and pattis not so irrigated at the time of settlement.
- (iv).—To arrange for the crediting to the Canal Department of a due proportion of the fixed land revenue assessed on the canal lands; the proportions fixed upon were two-thirds of the assessment of lands watered from canals, assisted by wells, and the whole of the assessment of lands watered from canals alone.

Major Wace in his review gives full information as to the measures which have been taken with reference to the above arrangements. The letter from Secretary to Government which sanctioned the extension to Muzaffargarh of the Mooltan rules for remission of canal revenue is No. 881 of 12th August 1881, and the Commissioner of Mooltan in his No. 161, dated 14th February 1883, reported that the rules had been duly promulgated. Major Wace writes that an engagement has been taken from the owners of the villages concerned accepting these rules as one of the

conditions of the settlement; but from the correspondence with the Commissioner of the Division this does not seem to be the case; and it will be advisable that the Government in sanctioning the assessments should expressly note that this sanction is given subject to the observance of these rules for remissions. The rules themselves, and full instructions for the working of the system, were published in this office Circular No. 39, dated 31st August 1882. They have been carefully explained to the people concerned through the Tahsildárs and Extra Assistant Commissioner Gholám Murtazá Khán, and copies of them have been placed with the settlement records of all canal-irrigated villages.

Hitherto no remissions have been given under these rules. The assessment on new canal irrigation amounted to Rs. 1,513 in 1880-81 and Rs. 1,873 in 1881-82; these amounts are treated as water-advantage revenue, and are credited to the canals in addition to the share of the fixed revenue for which credit is given, and which amounts to Rs. 2,27,520. The great advantage of this new system is, that if in future the canals are badly managed, the fact will be promptly brought to the notice of Government by the falling-off in its revenue, and relief will be given to those who suffer from the mismanagement.

13. Draft rules for the future working of the *chher* system in Muzaffargarh, which is sufficiently described in paragraphs 7, 8, and 9 of Chapter VII of the report, and in paragraph 12 of Major Wace's review, were submitted to Government by this office letter No. 743 of 26th July 1882, and are still under consideration. The rules are based on those which were framed for the Mooltan District. As the obligatory force of the rules rests upon an entry in the settlement records, it will be necessary that the rules should be formally approved and promulgated before the sanction of Government is given to the tenders of engagement for the land revenue and to the settlement records, and that the observance of these rules should be one of the conditions on which the assessment is sanctioned. One important point which is still under discussion relates to the question whether the Executive Engineer in making the annual distribution of *chhers* is to use, as the basis of that distribution, the area irrigated in the preceding year, or whether it will be possible for him to ascertain the areas of the current year's irrigation in time for him to use these as his basis.

The rules as now drafted defined strictly the objects on which the Zar-i-nágha Fund shall be expended, and expressly state that it shall not be employed in making new canals or extensions of existing canals; the object of this provision is to restrict the expenditure from the fund to its legitimate purpose, the performance by hired labour of work which the absentees would, if present, have been bound to execute.

14. Major Wace in paragraph 13 of his review has con-

The relations between the Canal Officer and Deputy Commissioner.

veniently supplemented Mr. O'Brien's brief reference to the appointment of the Executive Engineer to the charge

of the canals. Since his review was written there has been some further correspondence on the question of the relation of the Muzaffargarh Canal and District Authorities, the result of which will appear from the following extract from paragraph 2 of letter from Junior Secretary to Government, to the Junior Secretary to Government, Public Works Department, Irrigation Branch, No. 64—1150, dated 25th September 1882 :—“ His Honor agrees with you and the Financial Commissioner that it is not necessary to subordinate the Executive Engineer to the Deputy Commissioner to a greater extent than is required by the ‘chher’ rules and in their proposed relations as regards the revenue management of the canals. He also agrees that for the present the Executive Engineer has enough to do with the canals alone without District and Provincial works. This question should be brought up again at some future date for reconsideration. The Zar-i-nágha Fund should, as proposed, be made over to the Canal Department for management and expenditure.” At the same time it was proposed to adopt a more elastic system of financial control over expenditure from the Zar-i-nágha Fund than that prescribed by the Public Works Code; but it is not known whether this question has been disposed of or not. Major Wace shows that the transfer of the canals to professional care has had a more satisfactory effect on their state, and it is to be earnestly desired that the experiment which has thus been made in Muzaffargarh may be sufficiently successful to justify its extension in the same, or in a modified form, to other districts similarly circumstanced.

15. The remarks made by Major Wace in paragraph

General results of the Settlement.

15 of his review very accurately sum up the results of the settlement. Mr.

O'Brien was unable, owing to defects in the previous revenue management of the district, to secure for Government any material increase of the revenue, but he has placed the future revenue administration of the district on a sound basis, and it may be confidently hoped that under the present settlement the district will make marked progress, and that when the time for re-assessment comes round, the Government will be able to claim a substantial enhancement of revenue.

16. The term of settlement was fixed at 20 years by paragraph 8 of Secretary to Government's letter No. 903, dated 18th August 1881, when passing orders on the Revenue Rate Report of the Muzaffargarh Tahsil.

17. There is a mistake in paragraph 19 of chapter VII of the report. The kharif instalments as sanctioned are—

Tahsil Alipur—15th December, 15th January, 15th February.

Tahsil Muzaffargarh—1st December, 1st January, 1st February.

Tahsil Sanaowan—15th December, 15th January.

This has been pointed out to the Commissioner of Mooltan, and the general question of the revenue instalments throughout the Province is now under consideration in communication with the Commissioner of Settlements and Agriculture.

18. The sanction of His Honor the Lieutenant-Governor is required under Section 18 of the Land Revenue Act, 1871, to the record of rights and to the assessments; and the sanction to the assessments should be made conditional on the revenue-payers consenting to such rules for the working of the *chher* system as the Government may from time to time promulgate, and on their accepting the revised rules for remission of revenue in case of the failure of canal irrigation, to which reference has been made in paragraph 12.

19. The Officiating Financial Commissioner desires me to add, in conclusion, that he entirely endorses the praise given to the Settle-

ment Officer's work by the Settlement Commissioner, and he trusts that the acknowledgments of Government will be conveyed to Mr. O'Brien and to those of his subordinates who have been selected for commendation by Major Wace. The report herewith forwarded is a most interesting one, and is evidently the result of much careful observation and research into the physical geography and former political and fiscal history of the tract of country comprised within the limits of the district. It also contains very full details of the social life of the people, and its only defect is the one already noticed, the meagreness of the section devoted to describing the operations of the settlement itself.

No. 340, dated Kasauli, 2nd December 1882.

From—Major E. G. WACE, Commissioner of Settlements and Agriculture, Punjab,
To—The Senior Secretary to Financial Commissioner, Punjab.

I HAVE the honor to forward the Final Report on the recent settlement operations in the Muzaffargarh District by Mr. E. O'Brien, c. s., Settlement Officer. The report reached me on the 29th April 1881, and was sent to the Central Jail Press to be printed on the 5th August 1881. It was not till the 23rd November that I received back the last portion of the report from the Press.

2. The operations now reported were commenced in May 1873.

Course and duration of Measurements were completed in two years, i.e., operations, Chapter VII, by June 1875. The 1st tahsíl assessment report paragraph 1. was submitted in February 1877, and the last in July 1878. The orders on the last report were not received till September 1879, and those on the previous reports had been similarly delayed. Operations were completed in July 1880, 7½ years after they were commenced. But at least 15 months of this duration was caused by the delay which occurred in the issue of orders on the assessment reports. The settlement was supervised by Mr. Lyall, as Settlement Commissioner, up to January 1879, and for the remaining 18 months by myself; Mr. Lyall has consequently a much more intimate knowledge of the character of the work and of the district than I have.

3. The report is replete with valuable local information, to attempt

Contents of the Report. to condense which in this review would serve no useful purpose. Both this book and his

valuable work on the Mooltáni language evidence in what a real sense Mr. O'Brien lived among the people; and he has in these two works made it comparatively easy for subsequent officers to acquire an intimate knowledge of the district. Chapter I describes the physical geography and natural history of the district, and also gives a very detailed account of the canals. Chapter II describes its history anterior to British rule, so far as this is known. Chapters III and IV give an account of its population, their habits, religion, and language. Chapter V describes the agriculture and other industries, but the latter are very unimportant.

Chapter VI describes the revenue systems which preceded our own, the summary settlements and the local tenures. Mr. O'Brien's remarks on the Sikh revenue system evidence much care, and will be read with interest. The tenures also are described with as much exact clearness as brevity. The only adverse criticism which can be made on the report relates to the unusual brevity of the VIIth Chapter, in which the settlement operations and assessments are described.

4. So far as I could judge, the measurements were good. The Measurements and records of rights has been very well put together, of rights, paragraphs 2, 14 and the volumes are neatly written. In particular the detailed history of each well or patti has been very clearly described under the system explained in paragraph 14 of Chapter VII. The only shortcoming I noticed is that the shares have been unnecessarily amplified and refined; the result being that the record does not state each owner's share in the terms in which he would himself describe it. Mr. O'Brien would have corrected this had it been in his power; but there were some difficulties involved, and he did not see how to meet these until it was too late to correct the record. The administration papers and the records of customs are very well put together.

5. The faults in the previous very rough demarcation of the rakhs were corrected by the Settlement Officer with much care, and a record of each rakh has been drawn up. The remarks in paragraph 22 of Chapter I, pointing out the difference between these rakhs and those of the Mooltan District deserve attention; especially when compared with para. 5 of his Chapter VII. Prior to these operations, the *firmi* was assumed to be due mainly from rakh lands, and was assessed from year to year. The assumption was incorrect, and the system of assessment was ill-suited to the local circumstances. The grazing revenue due from the waste of each village has now been settled at a fixed charge for the term of settlement, and the rakhs are leased separately. The introduction of the new system has caused no loss to Government; but of the grazing revenue now paid about eighth-ninths is contributed by the village waste, and only one-ninth by the rakhs. The change of system must have given great relief both to the people and to the Government Revenue Officers. The rules for the management of the rakhs referred to in para. 4 of Chapter VII, were issued in the Government's Notification No. 94 dated 21st March 1882, and a copy is enclosed with this letter in order that it may be added to the appendices of the report.

6. The first summary settlement appears to have fixed the revenue at less than three-fourths of the Sikh collections (reckoning not only the reduction in the *mahsúl*, but also the abolition of cesses). By 1861 this demand had been further reduced a seventh in Muzaffargarh and a fourth in the

The past fiscal history of the district under British rule.
Paras. 13—17 of Chapter VI.

other two tahsils. That is to say, by 1861, the State had reduced its demand to about 60 rupees for every 100, that the Sikh Government levied up to 1845. The re-assessment now reported has increased this demand by four per cent. That this should be

Para. 1 of Chapter I.

the result of over 30 years of British rule in a fine alluvial district, possessing unlimited facilities for irrigation of which only a fourth is cultivated, and in which the culturable waste available for cultivation (I do not count the rakhs) is twice the area of the present cultivation, is very strong evidence of the practical failure of our revenue administration in this district up to the date of Mr.

O'Brien's operations. There had been no increase of cultivation, the canals which were in fair order in 1847, and on which at least two-thirds of the revenue depends, steadily decreased in irrigating efficiency, and abuses of all kinds had abounded in the collection of the revenue. Mr. O'Brien's efforts towards the correction of these results have been mainly applied in two directions. He has relieved from the system of fixed assessment those alluvial lands which were so exposed to or dependent on the river floods, that the conditions of their cultivation were insecure and beyond the control of the cultivator; and he has established a system of canal management, which will secure the proper management of these canals in the future, and also due relief to the cultivators when the canal water fails them.

Chapter VII. para. 24; also para. 8 of same Chapter, and para. 16 of Chapter VI.

7. I will first deal with the assessment. The whole Indus bet in all

The assessment paras. 21—32 of Chapter VII.
placed under fluctuating assessment.

three tahsils has been placed under a fluctuating assessment; also the whole Chenab bet below the junction of the Chenab with the Sutlej. North of that point the bet wells have a fixed assessment, but the sailab lands of the bet are assessed annually. The object of this fluctuating or annual assessment is this. Under the expired settlement the assessment was substantially on the bet land in its culturable aspect; that is to say, it was assumed that if the land was culturable it would be cultivated. The lands of each village fell roughly into two classes, (i)—those which were culturable or cultivated at the time when the settlement was made, and these had a fixed assessment, to which the owners were rigidly held so long as by river action the land was not made permanently unculturable; (ii)—lands newly formed by the river or made culturable by alluvial deposit after date of settlement, and these were assessed *as soon as they became culturable* at the average rate of the fixed assessment on the 1st class. The fault of the system was, that it made the assessment depend on the apparent quality of the soil: and assumed that its cultivation was at the command of the cultivator in the same degree as in the case of lands not exposed to floods, whereas in truth, the power of the owners to cultivate it depended in a very minor degree on themselves, and mainly on the action of the floods; which action extended with similarly capricious results over the whole alluvial that they inundated. The new system of assessment is based on the recognition of fact, that such land as is exposed to the annually recurring action of the Indus and Chenab floods, is not really under the command of the cultivator; when the action of the floods is favorable, he can culti-

vate and can pay revenue accordingly. When he does not cultivate, it is usually due to the unfavorable character of the floods; and to enforce a claim for revenue under such circumstances is opposed to the fundamental principles of our revenue administration. The rates fixed for sailáb cultivation in these lands vary from 18½ and 17 annas on the Chenab, to 15, 14, and 13 annas on the Indus. The Chenab rates are

Dera Ismail Khan Settlement Report, paras. 486, 494 and 499.

much the same as those of the Mooltan District.

The Indus rates are much the same, or but slightly higher than those recently applied in like circumstances in the Dera Ismail Khan

District. In the numerous cases in which these sailáb lands are assisted by wells or jhallárs, an additional rate is charged of Rs. 9 per well on the Chenab and Rs. 8 and 6 on the Indus.

Chapter I., para. 13.

These well rates are equivalent to an enhancement of the sailáb rate by 5 and 6 annas, so that the nett result on these sailáb lands assisted by wells, is much the same as in Jhang

Jhang Report, para. 183.

where they have been charged from 20 to 22 annas per acre. In the Bhakkar Tahsíl of

Dera Ismail Khan also such lands have been charged 20 annas per acre.

8. The whole cultivated area under fluctuating assessment is about

Gross result of the fluctuating assessment.

Chapter I., para. 11, Chapter VII., para. 35.

120,000 acres, and it contributes over a fourth

of the revenue of the district. The Settlement

Officer shows that this measure has already

increased the revenue of the sailáb lands by

nearly Rs. 15,000, or one-tenth. And I believe

that the annual reports show that the system is

worked with ease and is appreciated equally by the Revenue Officers

and by the land owners; and that the revenue assessed under it is

collected with greater ease than that of any other part of the district.

It would be nothing less than a calamity, if for lack of supervision, a

system so well adjusted to the physical circumstances of these sailáb

tracts were to fall into confusion and be discredited.

9. In the rest of the district the system of fixed assessments, has

The fixed assessment of the district.

been continued, it being assumed that the

canals would in future be properly engineered

and managed. Looking only to the past, this was no doubt a bold

assumption to make; but as I shall show later on we had grounds for

believing this. Lands irrigated by wells alone or by canals alone have

been assessed at from 15 to 20 annas per acre, and when assisted by

both agencies at from 19 to 28 annas. These

rates seem to me on the whole rather above

than below those recently assessed in the

adjacent tracts of the Mooltan District.

Para. 11 of Settlement Commissioner's No. 281, dated 14th September 1881. reviewing Mooltan Settlement Report.

10. The share of the fixed revenue to be credited in future to the Canals is—

Share of the fixed revenue to be credited in future to the canals.

Para. 11 of Chapter VII., and Settlement Commissioner's No. 76, dated 20th April 1882, to Settlement Secretary to Financial Commissioner.

Secretary to Government Punjab's No. 903, dated 18th August 1881.

Tahsíl.		Amount.
		Rs.
Sanawan	...	51,549
Muzaffargarh	...	1,21,746
Alipur	...	54,225
Total	...	2,27,520

In addition to this, land newly coming under irrigation will be charged 6 annas per acre in Tahsíl Sanawan, and 8 annas per acre throughout the rest of the district. (This decision has been arrived at since the Settlement Officer wrote the last part of para. 11 of his Chapter VII.) The 8 annas charge on new irrigation will not be fixed revenue, but will fluctuate each year according to the area of that irrigation.

11. But though the canal revenue due from lands irrigated at

Conditions provided for the remission of canal revenue in the case of the failure of the canals.

Para. 11 of Chapter VII., also Settlement Secretary to Financial Commissioner's No. 725, dated 11th January 1881 to the address of the Secretary to Government, Punjab, and Secretary to Government's reply No. 881, dated 12th August 1881.

the time of settlement has been fixed for the term of the new settlement, as was the case under the settlement that has expired, arrangements have been made with the object of securing adequate relief to the land owners in cases of complete failure of a canal or successive partial failures of a severe kind. It was one of the main faults of the expired settlement, and a cause of severe pressure of revenue during its currency, promoting illicit practices in its collection, and demoralising the land owners from whom the canal revenue was due, that no provision had been made for necessary adjustments of this nature. In the Mooltan settlement just concluded, the Settlement Officer decided for each holding the extreme limit of revenue remissible on such grounds. But in Muzaffargarh the same object has been secured by an entry in the administration paper of each village. The entry provides a maximum limit to be applied to the holdings of each village. This limit usually is (i) for lands dependent wholly on canal irrigation, the whole revenue; (ii) for lands irrigated both by wells and canals, usually $\frac{1}{2}$ the revenue; but (iii) in special villages $\frac{3}{4}$ or $\frac{1}{2}$, according as the wells happen to be peculiarly dependent on the assistance of the canals or comparatively independent of such assistance.

Detailed rules defining the circumstances under which such remissions will be allowed—the same as sanctioned for the Mooltan District—

have been incorporated in the Settlement Record; and an engagement has been taken from the owners of each village concerned accepting these rules as one of the conditions of the Settlement. The rules are as follows :—

I.—“ No remissions should ordinarily be allowed either for total

1.—Lands assessed below or partial failure of canal water when the total assessment (fixed and remissible) of the well or rates. No remission, patti is much below rates. For it will be considered that the assessment of the holding shows that allowance for such failures has been made in the assessment. The only exception to this rule will be when a severe failure, resulting in large diminution of cultivation or great loss of crop, occurs for several consecutive years. The Deputy Commissioner may then grant some remission if he thinks the

except in case of continuous failure,

and not then if the revenue is very light.

assessment, though much below rates, has become temporarily oppressive owing to the continuous failure. But if the assessment is not merely much below rates, but is exceedingly light and trifling in amount, then no remission should be allowed under any circumstances.”

“ *Explanation.*—The total assessment of a holding will be held to be

Explanation of “assessed below rates.”

below rates if the sanctioned revenue rates of the circle (canal and well, or canal alone, as the case may be) when applied to the average annual

cultivated area, as ascertained by the Settlement measurements and subsequent girdāwaries, give a product above such total assessment.

“ II.—No remission should be allowed if it appear that the appli-

No remission if canal water is applied to some holdings to the neglect of others,

cant has intentionally failed to take water and to cultivate the well or patti in question, for the purpose of increasing the cultivation of other wells or pattis in which he is interested.”

“ III.—As it is difficult to distinguish irrigation or moistening by

All river flood and drainage irrigation to be held to be canal irrigation.

river or rain drainage floods from irrigation by canal water, all such moistening which has benefited a well or patti will be counted as

canal irrigation in dealing with claims to remission.”

“ IV.—When the total assessment of a well or patti is up to, or

II.—Lands assessed at revenue rates.

but little below, the canal and well, or canal alone, revenue rates of the circle, the following rules will apply :—

“ (1).—If no canal-water is received during the season, or if the crops sown are entirely spoilt by the canal ceasing to flow, a remission should be granted, provided, of course, that rules II and III do not apply.

Total failure entitles to complete remission.

“ (2).—If, however, the failure is only partial, that is, if some

Partial failure does not necessarily entitle to any remission,

canal-water is received during the season and some crops are grown with its aid, no remis-

sion should be allowed merely because the supply has been below the average; for the revenue rates were so pitched as to allow for a considerable degree of fluctuation in amount of canal-water received.

“(3).—Some remission should, however, be allowed if the partial failure is both severe and continuous, that is, if in two or more consecutive years the supply of water is so scanty and inopportune as to cause much injury either by diminishing the area of cultivation, or by preventing the cultivation of the usual proportion of the superior crops, or by causing part of the crops sown to dry up.”

When framing these rules, the Financial Commissioner observed that he considered it necessary strictly to define and limit the power of Deputy Commissioners to grant remissions. The fixed contract for the Government Revenue is of a liberal character, and it should not be remitted on light grounds. But within the limitations stated in the rules the Financial Commissioner said that he wished to rely on the discretion of the Deputy Commissioner and to encourage him to use that discretion freely. There can be no doubt that these rules, while sufficiently securing the State against ill-founded claims, will provide sufficient relief in the case of canal failures. And situated as the Muzaffargarh canals are, it would be unreasonable to expect that no such failures shall occur, even under the best engineering management.

12. The Canal Revenue above referred to occupies the same position as the owner's rate described in Sections

The system of clearing the canals annually by *chher* or *stautte* labor. Chapter VII, paragraphs 7-9.

37 and 38 of the Northern India Canal and Drainage Act; that is to say, it is not in its history and present position so much a charge for the water as an assessment of Govern-

ment's share of the increased rent arising from the irrigation of the land. No occupier's rate has ever been levied on these canals, mainly no doubt because they owe their existence to the co-operation of the local ruler and of the irrigators; and have always been maintained by a continuance of that co-operation. It is probably not the case that they were constructed without a considerable expenditure, or otherwise than under the direction and control of the local ruler; on the other

Settlement Secretary Financial Commissioner's No. 3226, dated 1st May 1879, to Settlement Commissioner Punjab.

hand, the digging was done mainly by the irrigators, and the necessary annual repairs have always been provided under the same system. For this reason the following entry has been made in the Administration paper of every

village irrigated by these canals :—

“Whereas Government has not introduced into this district the system of occupier's rate laid down in Section 36 of the Canal Act, we on our part engage to maintain the custom hitherto in force, under which the canals are cleared out every year by *chher* labor. And we agree that the number of days, *chher* labor supplied by us shall be assessed according to the area irri-

gated. Persons who fail to supply the ehher labor thus demanded will pay a cash zar-i-nāgha, the amount of which will be fixed by the Government's rules under the Canal Act."

The entry was made without waiting for the sanction of Govern-

Settlement Secretary Financial Commissioner's No. 5406, dated 25th July 1881.

Secretary Government Punjab's No. 726, dated 5th July 1881, to Joint-Secretary Government Punjab, Public Works Department, Irrigation Branch.

not been informed what final decision has been arrived at on the subject.

13. The Settlement Officer notices in very brief terms the appoint-

Future system of canal management.

Chapter VII, paragraph 8.

Settlement Commissioner's No. 234 dated 29th May 1879, to Settlement Secretary to Financial Commissioner.

The latter officer's No. 4530, dated 23rd June 1879, to Joint-Secretary to Government Punjab, Irrigation Branch, Public Works Department.

Joint-Secretary, Public Works Department (Irrigation Branch), Government Punjab, No. 2186, dated 7th May 1879.

tendent assisted by a Native Engineer of a Subordinate Grade, both of whom were to be paid from the fines levied on absentee ehher laborers.

This was a truly disheartening result of 5 years' efforts and correspondence.

But as hopes were held out that skilled assistance would be given if the new outlay therein involved could be reduced from Rs. 50,000 to Rs. 25,000 per annum, the local authorities and Superintending Engineer of the Derajat Circle made another endeavour to secure the desired

assistance. It was pointed out that the reluctance of Government to act in the matter had arisen from two causes,—1st, from an apprehension that the introduction of Canal Officers would bring in novel and unnecessary systems of management for which the people were not prepared; and, 2ndly, from the large additional expenditure that was proposed as necessary to the introduction of the new agency. The Settlement Officer, though strongly in favour of the change, had admitted that the people disliked the idea of the proposed change owing to the apprehension first mentioned. In order to meet these objections it was proposed that the Executive Engineer in charge of the Muzaffargarh Canals should work as an Assistant to the Deputy Commissioner, as regards the Revenue management of the Canals and the working of the ehher system; that no new Revenue establishment should be introduced, but that the Executive Engineer should have the assistance of the Thasildárs, Lambardárs and Patwáris, in the same manner as they had hitherto been employed by the Deputy Commissioner; that all alterations of irrigating systems should be studiously avoided, the Executive Engineer merely continuing the previous system of Revenue management under the Deputy Commissioner's control, at the same time as by his skilled knowledge he secured the proper annual clearing of the Canals, their improvement and extension. The entire new outlay involved in these proposals was found on examination in the Chief Engineer's office to be Rs. 28,780. It was shown in the course of the correspondence that the pre-existing system, which threw the charges of the Canal management on the absentee ehher fund, was a misapplication of the purposes for which that fund was levied; that the system had in the past supplied a motive for the oppressive mismanagement of the ehher system (for obviously if there were no fines there were no funds for paying expenses of management and to meet the cost of necessary works); and that, if the management expenses were still to be provided from this fund, it was certain that the old abuses in ehher management could not be eradicated. Finally, it was urged that it was impossible to expect Government to supply the money necessary for the due improvement and extension of these Canals, unless an adequate guarantee for the successful management of the Canals was provided by skilled engineering management. The new outlay having been reduced to Rs. 29,000 per annum, the Government acceded to these representations. The detailed application of the new system has apparently not yet been worked out; that is to say, the detailed rules for the management of the Muzaffargarh Canals are still under consideration. But I hope the main lines of the proposals which ultimately secured the appointment of an Executive Engineer to these Canals will not be lost sight of. These were, that the control of the higher Engineer Officers of the Irrigation Department should be confined strictly to matters, of which as Engineers they are necessarily the sole and proper judges; that in respect of all other matters the control of the Deputy Commissioner should remain intact, the Executive Engineer being, on the one hand, distinctly subordinated to him, and on the other hand, receiving the same assistance from the Deputy Commissioner's Revenue establishment and from the village Revenue Officers, as the Deputy Commissioner received when no Canal Execu-

live Engineer had been appointed. If these principles are lost sight

See Chief Engineer's memorandum dated 4th July 1879, enclosed in Joint-Secretary's (Irrigation Branch) No. 068, dated 4th July 1879, to the Settlement Secretary to Financial Commissioner.

Financial Commissioner's remarks) this association of the Canal Officer with the Deputy Commissioner may not be without its practical difficulties; but if the Deputy Commissioner and the Canal Officer are thoroughly in earnest in their desire to work in harmony, these difficulties will be overcome. And the Commissioner and the Superintending Engineer will have to be on the watch that departmental

jealousy is not allowed to interfere with the working of the new system. Mr. Lyall further remarked on the same occasion that the proposed system is undoubtedly the proper way of working canals like those of Muzaffargarh in an efficient and yet economical manner; and that an immense waste of power is involved in excluding the Revenue authorities of the district and their establishments from rendering assistance in the administration of canals, to which about half the district agriculture may be said to owe its very existence.

Results of the new canal administration.

Paragraph 6 of Secretary to Government, Punjab, No. 903, dated 18th August 1881.

14. The results of the new system are so far most encouraging. The following statement of the areas recently irrigated has been furnished to me by the Deputy Commissioner (Mr. O'Brien) with these remarks:—

"The canal area was measured only twice before the canals were transferred, *viz.*, at settlement and in 1879-80. The canal area according to the settlement measurements was 969,006, but these figures show a larger area than ever was irrigated in a single year, because at settlement all land which had recently received canal water, or which had canal cuts leading to it, was recorded as canal-irrigated, though the whole of it was never irrigated in any one year. The settlement area may, however, be taken as a standard. If irrigation falls below it, it may be assumed that the canals are not working well. Any increase on the irrigated area of settlement may be taken credit for as due to improved canal management.

"After settlement the canal area was first measured in 1879-80. It amounted to 180,813 acres. This was the last year of the Deputy Commissioner's management.

"In March 1880, the canals were made over to the Canal Department. The following is the result:—

			<i>Acres.</i>
1880-81	...	...	208,958
1881-82	...	...	219,130

" In 1880-81 the area actually irrigated in that year was within a fraction of the settlement area, which was exaggerated, as already shown.

" In 1881-82 the canal area was 10,124 acres in excess of the settlement area.

" These figures are very satisfactory. There has been besides an almost complete cessation of the complaints about insufficient and irregular irrigation which used to be very numerous."

TAHSIL.	CANAL AREA.			
	According to settlement measurements.	1879-80, Girdāwari.	1880-81, Girdāwari.	1881-82, Girdāwari.
	Acres.	Acres.	Acres.	Acres.
Muzaffargarh ...	99,989	94,284	102,855	101,432
Sanawān ...	58,305	29,846	41,999	54,105
Alīpur ...	50,712	56,683	64,104	63,593
Total ...	209,006	180,813	208,958	219,130

Similarly, a year previous another Deputy Commissioner, Mr. Gladstone, wrote in his annual report for 1880-81 :—

" There is no doubt that canals in this district are improving. In fact this year I myself have observed, though the rivers are not high yet, the canals are full and running to waste. The people simply cannot use all the water. Great care has been spent by the Executive Engineer and his able Deputy Collector, Báshir Ahmed, in giving the canals good heads and proper slopes. The result is that the canals are just running a little too well. What we want now is drainage. It will be remembered that along the road from Khángarh to Alipur there is a succession of low bits of land filled with water, and connected in the high floods, but known by different names at different localities. These depressions have a winding course generally north and south. Though in high floods they are connected, and the surplus water runs into the Chenab, still in moderately high water they simply flood the

land about. As they receive the spill of several Chenab canals and a large number of Sind canals, the question of their drainage is a very serious one. First, on account of communications, *e.g.*, roads, bridges; second, on account of the swamping of lands rendering them waterlogged and sour. The Canal Officers have connected these depressions by a series of straight drainage cuts. This has been most successful so far, and carries off ordinary water into the Chenab admirably and with a high velocity. But probably in consequence of want of funds the work has been carried out on a small scale, possibly experimentally. From observation I am inclined to think that the drainage cuts could not carry off all the flood water, and that next year the drainage works will have to be much extended. The cost will probably be little or nothing, the *chhars* being sufficient. In fact, it would be all the better if next year a little less clearance on some of the canals were executed, and the labour transferred to the drainage.

"However, every thing cannot be done at once, and the Executive Engineer has done wonders in improving his canals. The people are struggling to break up and clear every available acre. Any one going to Alipur will see stumps being removed and jungle cleared in every direction. The Sanawan canals, formerly a rock ahead in the material progress of the district, are running admirably, and will probably run till November* * * * * Chher system—The *chher* system may have excited jealousy at first; if it did it does not exist now. In going through Sanawan, Muzaffargarh and Alipur, no petitions were presented of any hardship connected with *chhars*. The work done by the *chhars* seems to be good and neat. In fact I think the *chhars* now feel like factory hands with participation in the profits."

* * * * *

15. I have endeavoured in the above paragraphs to show that, although owing to the shortcomings of the previous settlement and antecedent revenue administration and the consequent general absence of prosperity in the district at the time when settlement work was commenced, Mr. O'Brien's operations have not secured any material increase to the Government's Revenue, he is entitled to the credit of having applied to the pre-existing revenue system such corrections as were required by the peculiar circumstances of the district; and he has probably laid the foundation of no little prosperity among the people and of a considerable future enhancement of Government Revenue.

16. After the report had been written, Government fixed the term of settlement for the whole district at 20 years. The engagements had already been taken for that term. Having regard to the large remissions of revenue that were granted in the first 12 years of our rule, none of which have been recovered at the present settlement, and looking to the probable extension of cultivation and canals and to the general improvement in prosperity that is likely shortly to occur, it would, I think, be a mistake to allow a longer lease on the present occasion,

Term of settlement, para.
18 of Chapter, VII.
Secretary, Government
Punjab's No. 903, dated
18th August 1881.

17. Mr. O'Brien was more fortunate in his principal subordinates than some of his contemporaries in settlement employ. Of the three Superintendents both Bhagwán Dás, Superintendent of Sananwan, and Shekh Súba, Superintendent of Muzaffargarh, deserve commendation.

Kázi Ghulám Murtaza the Extra Assistant Settlement Officer for the last 5 years of the settlement also deserves much praise.

Mr. O'Brien's own works deserve the warm acknowledgments of Government ; but this is a matter which I can confidently leave in the hands of Mr. Lyall under whose supervision most of the work was done.

Referred to in Settlement Commissioner's No 340, dated 2nd December 1882, to the address of the Senior Secretary to Financial Commissioner, Punjab.

The 21st March 1882.

No. 94.—Notification.—Under the powers conferred upon him by Section 50 of the Punjab Laws Act (No. IV of 1872), the Lieutenant-Governor of the Punjab is, with the previous sanction of the Governor-General in Council, pleased to make the following rules under Section 48 of the same Act, for the management of the lands owned by Government in the Muzaffargarh District, which are specified in the schedule attached to the rules :—

1. No person shall pasture cattle, or cut wood or grass, or gather fuel or any spontaneous produce in the above-mentioned lands except—

- (1) under the authority of a license granted by the Deputy Commissioner of the district, or
- (2) with the permission of the farmer to whom any such privileges are for the time being farmed by the Deputy Commissioner of the district.

2. Every such license shall be in writing and signed by the Deputy Commissioner and license-holder, and shall state—

- (a) the nature, extent and duration of the rights thereby conferred ;
- (b) the consideration paid, or to be paid, by the license-holder ;
- (c) the special conditions, if any, on which the license is granted.

3. Every farming lease granted under rule 1, clause (2), shall state the particulars mentioned in rule 2, and shall include—

- (a) in cases where the consideration money is payable by instalments, the amount of the said

instalments, and the dates on which they will fall due ; and

- (b) in cases where the lease relates to the right of grazing, a specification of the maximum grazing dues which the farmer may levy and a promise on his part not to levy from graziers any dues except such as are specified in his case.

4. License-holders and all persons acting under the permission of a farmer shall comply with the conditions so specified, and every farmer shall observe and enforce the conditions entered in his lease.

5. If any license-holder or farmer, or person acting under permission of a farmer, fails to observe the conditions on which the license or lease was granted, the Deputy Commissioner may at his discretion cancel the said license or lease, and in such case the license-holder or farmer, and all persons acting under the said farmer, shall forfeit all claims to any produce or wood which at the time of the cancellation of the license or lease has not been removed from the land to which the license or lease applies. The said license-holder or farmer shall not be liable for any fees outstanding on the produce or wood so forfeited ; but he shall have no claim to refund of dues already paid, and he shall not be thereby discharged from his liability for the payment of other dues in arrears, or of instalment overdue by the terms of his lease at the date of the forfeiture.

- 6. (1) Persons pasturing cattle, or cutting grass, or wood, or gathering fuel or other spontaneous produce contrary to the provision of rule 1 ; and
- (2) any farmer or his agent levying grazing dues at higher rates than those fixed in the lease, or acting in contravention of the special conditions, if any, contained therein ; and
- (3) any license-holder acting contrary to any of the conditions specified in his license shall be liable on a first conviction to simple imprisonment for one month, or to fine not exceeding Rs. 100, or to both, and, on a subsequent conviction under this rule within three years of the first, to imprisonment not exceeding six months, or to fine not exceeding Rs. 300, or to both.

List of Rakhs which will be managed by the Deputy Commissioner, and to which the Rules under Section 48 of the Punjab Laws Act shall apply.

District.	Parganah.	Name of Rakh.	Area in acres.	Direction.	Boundaries.
Muzaffargarh ...	Muzaffargarh ...	Kodíwál کوڈیوال	8,296	North of Rangpur ...	North.—Lands of Tahsil Shorkot, Jhang District. South.—Village lands of Kodíwál. East.—Village lands of Dera Fazil, Maksúd-pur, Amirpur Serhana, Kiri Ali, Mardan, Chak Farazi, Shah Muhammadwála. West.—Village lands of Sulhi, tahsil Muzaffargarh, and land of Tahsil Leiah in Dera Ismail Khan District.
Ditto ...	Ditto ...	Dera Haibat, 1st plot ... دیرہ ہایب تکڑہ اول	1,240	North-west of Mauza Fettu Fanakka.	North.—Lands of Tahsil Sanawan. South.—Village lands of Dera Haibat. East.—Village lands of Guluwála. West.—Village lands of Dera Haibat.
Ditto ...	Ditto ...	Dera Haibat, 2nd plot. دیرہ ہایب تکڑہ دوم	...	...	North, East and West.—Village lands of Dera Haibat. South.—Village lands of Behli.
Ditto ...	Ditto ...	Kotla Sádát کوٹلہ سادات	512	West of Kotla Sádát.	North.—Village lands of Jhollarin. South.—Village lands of Torat. East.—Village lands of Pipli and Kotla Sádát. West.—Lands of Kotla Sádát.

Ditto	...	Ditto	...	...	Kunjal Sandfia, کُنْجَل سَنْدِفِیَہ	...	478	East of Kunjal Sandfia.	<i>North</i> .—Lands of Tahsil Sanawan. <i>East</i> .—Village lands of Taraf. <i>South and West</i> .—Village lands of Pakka Sandfia.
Ditto	...	Ditto	...	...	Khánpur خَانپور	...	52,506	North-West of Muzaffargarh.	<i>North</i> .—Lands of Tahsil Sanawan. <i>South</i> .—Village lands of Mubarakpur and Daulatpur. <i>East</i> .—Lands of Rakht Alipur. Kashu and Tofapur, village lands of Khanpur, Mahrafarz, Muzaffargarh, L. tukran, Ghazipur Dasti, Chak Mithan, Ikampur and Jalálabad. <i>West</i> .—Lands of villages Sultan Khar, Sharif Panwar, Fazil Kalru, Baghwáli Cholistan, Sidhanwáli, Tibbi, Bura Sharqi, Núr Kubra, Sabzo Jat Aliwála, Chak Ali-daba and Daulatpur.
Ditto	...	Ditto	...	...	Sádewahan سَادِیَوَہَن	...	656	South of Mauza Patni.	<i>North</i> .—Village lands of Patni. <i>South and east</i> .—Village lands of Sádewahan. <i>West</i> .—Village lands of Patni and Shekhpur.
Ditto	...	Ditto	...	...	Jogiwáli جَوِیَوَالِی	...	787	Five miles to the south-west of Khángarh.	<i>North</i> .—Village lands of Wahi Mirza Beg and Basti Qazi. <i>East</i> .—Village lands of Rakha Núr Khan, Chimirwala and Shabarwala. <i>West</i> .—Basti Qazi and Phullanwáli. <i>South</i> .—Village lands of Daira Wadhu.
Ditto	...	Ditto	...	...	Daira Wadhu دایرہ وِدھو	...	315	East of Daira Wadhu.	<i>North</i> .—Village lands of Shakar Bela, Daira Wadhu. <i>South</i> .—Village lands of Rakha Sirkar. <i>East</i> .—Village lands of Kabirpur. <i>West</i> .—Village lands of Daira Wadhu.

List of Raddis which will be managed by the Deputy Commissioner, &c.—(continued).

(28)

DISTRICT.	Parganah.	Name of Rakh.	Area in acres.	Direction.	Boundaries.
Muzaffargarh	...	Harpallo هر پالو	467	South of Muhammadpur.	<i>North.</i> —Village lands of Muhammadpur. <i>South.</i> —Village lands of Harpallo. <i>East.</i> —Village lands of Harpallo and Muhammadpur. <i>West.</i> —Village lands of Hassanpur.
Ditto	Ditto	Chatwahan چتر واهن	468	South-west of Umarpur.	<i>North.</i> —Village lands of Muhammadpur. <i>South and West.</i> —Village lands of Chatwahan. <i>East.</i> —Village lands of Chak Nahiwa and Muhammadpur.
Ditto	Ditto	Muhammad Fakhsh Khadar. محمد فخش خادر	547	South of Muhammad Bakhsh Khadar.	<i>North.</i> —Village lands of Muhammad Bakhsh Khadar. <i>South.</i> —Village lands of Umar Budh and lands of Tahsil Sanawan. <i>East.</i> —Village lands of Muhammad Bakhsh Khadar. <i>West.</i> —Village lands of Muhammad Bakhsh Khadar and lands of Tahsil Sanawan.
Ditto	Ditto	Ahmad Bari احمد باری	329	North of Ahmad Bari.	<i>North, South and East.</i> —Village lands of Fazil Kalru. <i>West.</i> —Village lands of Ahmad Bari.

Ditto	...	Ditto	...	Umar Budh	...	312	North of Umar Budh.	<i>North. East and West.</i> —Village lands of Fazil Kalra. <i>South.</i> —Village lands of Umar Budh.
Ditto	...	Ditto	...	Bet Ludā	...	1,082	East of River	<i>North.</i> —Rakh Sarkar Karindād Kuraishi under Forest Department. <i>South.</i> —Village lands of Bet Walidād Khulān. <i>East and West.</i> —Village lands of Bet Ludā.
Ditto	...	Ditto	...	Ahmad Mohāna	...	2,285	Ditto.	<i>North.</i> —Village lands of Ahmad Mohāna. <i>South and West.</i> —River Indus. <i>East.</i> —Village lands of Ahmad Mohāna.
Ditto	...	Ditto	...	Rakh Sarkar, alias Muhammad Dāhā.	...	1,360	North of Kinjar	<i>North.</i> —Village lands of Chibbar Khor and Kamal Kurai. <i>South.</i> —Village lands of Basti Lardā. <i>East.</i> —Village lands of Mir Hāji and Basti Jāh. <i>West.</i> —Lands of villages Seri Kacha Samāna, Lona and Basti Lunda.
Ditto	...	Ditto	...	Basti Jāh	...	859	North-east of Kinjar	<i>North.</i> —Village lands of Mir Hāji. <i>South and West.</i> —Village lands of Basti Jāh. <i>East.</i> —Village lands of Goran Bagrain, Ghāzi Gopang, Ahmad Patah, Maluk Chaur, Palit Kalra.
Ditto	...	Ditto	...	Bet Qāim Shāh	...	1,232	East of River Indus.	<i>North and East.</i> —Village lands of Bet Qāim Shāh. <i>South.</i> —Lands of villages Mando and Bet Chin. <i>West.</i> —Village lands of Bhindi Subman Shāh.
Ditto	...	Ditto	...	Khulāng	...	1,601	South of Khulāng.	<i>North.</i> —Village lands of Khulāng. <i>South.</i> —Village lands of Ghalpur. <i>East.</i> —Village lands of Khulāng and Ghalpur. <i>West.</i> —Village lands of Mando.

List of Rakhs which will be managed by the Deputy Commissioner &c.—(continued).

(30)

District.	Parganah.	Name of rakh.	Area in acres.	Direction.	Boundaries.
Muzaffargarh ...	Muzaffargarh ...	Málíkpur ... مالك پور	722	South of Málíkpur ...	<i>North, east and west.</i> —Village lands of Málíkpur. <i>South.</i> —Village lands of Jahr Ratheb, in tahsil Muzaffargarh, and village lands of Bakaini, tahsil Alipur.
Ditto ...	Ditto ...	Hasanpur Kacha ... حسن پور کچھ	1,321	West of Mehra ...	<i>North.</i> —Village lands of Metla and Basti Jhangar. <i>South.</i> —Village lands of Hasanpur Kacha. <i>East.</i> —Lands of villages Basti Jhangar, Hasanpur and Hasanpur Kacha. <i>West.</i> —Lands of villages Sijra and Taror, Hasanpur.
Ditto ...	Ditto ...	Jahr Ratheb ... جهر راتھب	372	North of Jahr Ratheb	<i>North.</i> —Village lands of Hasanpur Kacha. <i>South.</i> —Village lands of Jahr Ratheb. <i>East.</i> —Village lands of Gindi Khakhi. <i>West.</i> —Village lands of Manikpur.
		Total ...	77,747		
Ditto ...	Alipur ...	Bet Mir Hazár Khan... بیت میر هزار خان	2,365	Near the east bank of the Indus.	<i>North.</i> —Village lands of Bakaini. <i>South.</i> —Village lands of Bet Mir Hazár Khan. <i>East.</i> —Village lands of Bakaini and Bet Mir Hazár Khan. <i>West.</i> —Village lands of Bakaini, Forest Department rakh of Bet Daryas, village lands of Bet Mir Hazár Khan.

Ditto	...	Ditto	...	Belawala	...	962	West of Belawala	...	<i>North.</i> —Village lands of Shahal Khan. <i>South and east.</i> —Village lands of Belawala. <i>West.</i> —Village lands of Blindi Kura and Belawala.
Ditto	...	Ditto	...	Mela Chacha, 1st plot میدل چچہ ٹکڑہ اول	...	493	North of Bet Khanwala	...	<i>North.</i> —Village lands of Bet Hazari. <i>South and west.</i> —Village lands of Mela Chacha. <i>East.</i> —Dinga Kurai.
Ditto	...	Ditto	...	Ditto 2nd plot ایضا ٹکڑہ دوم	...	...	...	...	<i>North.</i> —Village lands of Bet Hazari. <i>South.</i> —Village lands of Bet Khanwala. <i>East.</i> —Village lands of Mela Chacha. <i>West.</i> —Village lands of Mela Chacha and Belawala.
Ditto	...	Ditto	...	Bet Bagh Shah بیت باغ شاہ	...	3,745	East of River Indus	...	<i>North.</i> —River Indus. <i>South.</i> —Village lands of Bet Diwan Sahib. <i>East.</i> —Village lands of Bet Bagh Shah and Bet Diwan Sahib. <i>West.</i> —River Indus and village lands of Bet Diwan Sahib.
Ditto	...	Ditto	...	Thal Meghraj Sharqi... تھل میگراج شرقی	...	3,565	East of Thal Meghraj	...	<i>North.</i> —Village lands of Shabpur and Bet Diwan Sahib <i>South.</i> —Village lands of Bhambbri and Thal Meghraj. <i>East.</i> —Village lands of Amirpur and Bhambbri. <i>West.</i> —Village lands of Thal Meghraj.
Ditto	...	Ditto	...	Ditto Gharbi... ایضا غربی	...	676	East of River Indus	...	<i>North.</i> —Village lands of Bet Diwan Sahib. <i>South.</i> —Village lands of Bet Mir Ahmad Jhabel. <i>East.</i> —Lands of villages Thal Meghraj, Wawat and Bet Mir Ahmad Jhabel. <i>West.</i> —River Indus.

List of Rakhs which will be managed by the Deputy Commissioner, &c.—(continued).

DISTRICT.	Parganah.	Name of rakh.	Area in Acres.	Direction.	Boundaris.
Muzaffargarh ...	Alpur ..	Kohr Pirán کوهر پیران	534	East of Kohr Pirán ...	<i>North.</i> —Forest Department rakh of Klan-wab. <i>South.</i> —District rakh of Mubib Shah. <i>East.</i> —Village lands of Chaudia. <i>West.</i> —Village lands of Daulatpur and Kohr Pirán.
Ditto ...	Ditto ..	Mubib Shah محب شاه	640	North of Mubib Shah	<i>North.</i> —Village lands of Kohr Pirán. <i>South.</i> —Village lands of Mubib Shah. <i>East.</i> —Village lands of Chaudia. <i>West.</i> —District rakh of Kherpur Pára and village lands of Mubib Shah.
Ditto ...	Ditto ...	Kherpur Pára, 1st plot خیر پور پارہ ٹکڑہ اول	987	East of River Indus ...	<i>North and south.</i> —Village lands of Kherpur Pára. <i>East.</i> —Village lands of Kohr Pirán and Kherpur Pára. <i>West.</i> —River Indus.
Ditto ...	Ditto ...	Ditto, 2nd plot ایضا ٹکڑہ دوم	...	...	<i>North, east and west.</i> —Village lands of Kherpur Pára. <i>South.</i> —Village lands of Bāqar Shah Janūbi.
Ditto ...	Ditto ...	Ditto, 3rd plot ایضا ٹکڑہ سوم	...	...	<i>North, south and west.</i> —Village lands of Kherpur Pára. <i>East.</i> —Village lands of Mubib Shah.
Ditto ...	Ditto ...	Bāqar Shah Janūbi ... باقر شاہ جنوبی	2,338	North-east of Bāqar Shah.	<i>North.</i> —Lands of villages of Chaudia, Nusratpur and Mubib Shah.

Ditto	...	Ditto	...	Chandia	...	168	West of Kotli Lal ...	<i>South.</i> —Village lands of Bāqar Shah and Dhaka. <i>East.</i> —Village lands of Nusratpur, Parara. <i>West.</i> —Village lands of Mubib Shah and Bāqar Shah.
Ditto	...	Ditto	...	تیبہ نور گوپانگ Tibba Nūr Gopāng	...	991	West of River Chenab	<i>North.</i> —Village lands of Khanwah. <i>South and west.</i> —Village lands of Chandia. <i>East.</i> —Village lands of Kotli Lal and District rakh of Kotli Lal.
Ditto	...	Ditto	...	کوتلی لال Kotli Lal	...	599	South of Kotli Lal ...	<i>North.</i> —Village lands of Bet Isa and Dhaka. <i>South.</i> —Village lands of Tibba Nūr Gopāng. <i>East.</i> —River Chenab. <i>West.</i> —Village lands of Dhaka and Tibba Nūr Gopāng.
Ditto	...	Ditto	...	سیرکی Sirki	...	570	South of Sirki	<i>North.</i> —Village lands of Kotli Lal and Khanwah. <i>South.</i> —Village lands of Nusratpur and Chandia. <i>East.</i> —Village lands of Kotli Lal. <i>West.</i> —Village lands of Chandia and District r kh Chandia.
Ditto	...	Ditto	...	لنگرواہ Langarwah	...	868	South of Langarwah...	<i>North.</i> —Village lands of Sirki. <i>South.</i> —Village lands of Kotli Lal. <i>East.</i> —Village lands of Sirki and Khanpur Naraka. <i>West.</i> —Village lands of Khanwah and Kotli Lal.
Ditto	...	Ditto	...	میسان کوت بھوا Missan Kot Bhua	...	272	In the midst of Mauza Missan Kot Bhua.	<i>North.</i> —Village lands of Langarwah. <i>South.</i> —Village lands of Kundai. <i>East.</i> —Village lands of Langarwah and Missan Kot Bhua. <i>West.</i> —Village lands of Langarwah.
Ditto	...	Ditto	...	میسان کوت بھوا Missan Kot Bhua	...	272	In the midst of Mauza Missan Kot Bhua.	<i>North, south, east and west.</i> —Village lands of Missan Kot Bhua.

List of Raks which will be managed by the Deputy Commissioner, &c.—(continued).

District.	Parganah.	Name of rakh.	Area in Acres.	Direction.	Boundaries.
Muzaffargarh	Alipur	Khanani	769	West of Khanani	<i>North and west.</i> —Village lands of Sultánpur. <i>South.</i> —Village lands of Shikhaní. <i>East.</i> —Village lands of Chanáni.
Ditto	Ditto	Sultánpur	562	West of Ghiri	<i>North.</i> —Village lands of Ghiri and Sultánpur. <i>South and west.</i> —Village lands of Sultánpur. <i>East.</i> —Village lands of Ghiri.
Ditto	Ditto	Basti Arif	1,632	South of Basti Arif	<i>North.</i> —Village lands of Basti Wain and Basti Arif. <i>South and west.</i> —Village lands of Shahbázpur. <i>East.</i> —Village lands of Kast Wains, Jhallarin and Shahbázpur.
Ditto	Ditto	Hamzewáli	2,225	West of Gagrewáli	<i>North.</i> —Lands of villages Chak Kotla Gámun and Hamzewáli. <i>South.</i> —Village lands of Madwála and Forest Department rakh of Madwála. <i>East.</i> —Village lands of Gagrewáli. <i>West.</i> —Village lands of Basti Wain and Jhallarin.
Total			25,510		

Ditto	...	Sanawan	...	Rakh Thalwáli تھل والی	...	113,601	East of Pirhar Munda	<p><i>North</i>.—Lands of tahsil Leiah in Dera Ismail Khan District, and village lands of Chak Aráin Sharqi in tahsil Sanawan.</p> <p><i>South</i>.—Lands of tahsil Muzaffargarh.</p> <p><i>East</i>.—Village lands of Part I Janúbi in tahsil Sanawan, lands of village Wandar, Patti Sultrán Mahmúd and Patti Ghulám Ali Gharbi in tahsil Sanawan, and lands of tahsil Muzaffargarh.</p> <p><i>West</i>.—Lands of villages Aráin Sharqi, Pattai Chak, Janúbi, Pirhar Munda, Wandar, Patti Sultán Mahmúd and Patti Ghulám Alí Gharbi, Patti Naich and Patti Khar.</p>
Ditto	...	Ditto	...	Patti Siál پتی سیال	...	5,430	North of Patti Siál	<p><i>North</i>.—Lands of tahsil Leiah in Dera Ismail Khan District.</p> <p><i>South</i>.—Lands of villages Patti Siál, Mírpur and Pattal Janúbi</p> <p><i>East</i>.—Village lands of Patti Siál.</p> <p><i>West</i>.—Village lands of Tibba and district rakh Tibba.</p>
Ditto	...	Ditto	...	Ahsánpur احسان پور	...	2,512	East of Ahsánpur	<p><i>North</i>.—Lands of tahsil Leiah in Dera Ismail Khan District.</p> <p><i>South</i>.—District rakh of Tibba, and village lands of Hinjrái.</p> <p><i>East</i>.—Lands of tahsil Leiah and District rakh of Tibba.</p> <p><i>West</i>.—Village lands of Ahsánpur.</p>
Ditto	...	Ditto	...	Tibbawáli تیبہ والی	...	13,767	East of Dairadínpanah	<p><i>North</i>.—District rakh of Ahsánpura and lands of tahsil Leiah in Dera Ismail Khan District.</p> <p><i>South</i>.—District rakh of Pattal Kot Adu.</p> <p><i>East</i>.—Village lands of Tibba, District rakh of Siálwál and village lands of Patti Siál, Mírpur, Marchun Chak Gharbi.</p> <p><i>West</i>.—District rakh of Ahsánpur and village lands of Hinjrái and Tibba.</p>

List of Rakhs which will be managed by the Deputy Commissioner, &c.—(concluded).

DISTRICT.	Parganah.	Name of rakh.	Area in Acres.	Direction.	Boundaries.
Muzaffargah ...	Sanawan ...	Pattal Kot Adu پتل کوٹ ادو	7,335	North-east of Kot Adu	<i>North.</i> —District rakh of Tibba and village lands of Tibba. <i>South.</i> —District rakh of Pirhár Sharqi. <i>East.</i> —Talai Nur Shah. <i>West.</i> —Village lands of Pattal Kot Adu and District rakh of Kot.
Ditto ...	Ditto ...	Pirhár Sharqi پیرھار مشرقی	3,024	Ditto	<i>North.</i> —District rakh Pattal Kot Adu. <i>South.</i> —Talai Chadhar. <i>East.</i> —District rakh of Pattal Kot Adu. <i>West.</i> —District rakh of Kot, village lands of Kot and Pirhár Sharqi.
Ditto ...	Ditto ...	Katwáli کتوالی	550	Ditto	<i>North.</i> —Village lands of Pattal Kot Adu. <i>South.</i> —Village lands of Kot and District rakh of Pirhár Sharqi. <i>East.</i> —District rakh of Pattal Kot Adu. <i>West.</i> —Village lands of Pirhár Sharqi.
Ditto ...	Ditto ...	Drigwáli درگہ والی	1,971	East of Drig	<i>North.</i> —Village lands of Talai Chadhar. <i>South.</i> —Village lands of Lal Mir. <i>East.</i> —Village lands of Shádi Khan, Munda. <i>West.</i> —Lands of villages Kotha, Hala, Drig.

Ditto	...	Ditto	...	Sá'ban Máchi صان ساجھی	...	1,882	East of River Indus ...	...	<i>North.</i> —Village lands of Kuluwála. <i>South.</i> —Forest Department rakh Isanwála and village lands of Isanwála and District rakh of Bhatti Metlawáli <i>East and west.</i> —Village lands of Sában Máchi.
Ditto	...	Ditto	...	Bhatti Metlawáli بھٹی متلا والی	...	1,028	Ditto	...	Under water.
Ditto	...	Ditto	...	Rakh Kullewáli کلی والی	...	401	Ditto	...	<i>North.</i> —Lands of Láchi Gurmani. <i>South.</i> —Lands of Kullewáli and Sihajwáli. <i>East.</i> —Lands of Sihajwáli. <i>West.</i> —Lands of Kullewáli and Shamba Márkanda.
Total Tahsil				...	Sanawan	...	151,968		
				GRAND TOTAL		...	255,225		

Proceedings of the Hon'ble the Lieutenant-Governor, Punjab, in the Department of Revenue and Agriculture (Revenue),—No. 230, dated 11th November 1885.

READ—

The Settlement Report of the Muzaffargarh District by Mr. E. O'Brien, c.s., late Settlement Officer, Muzaffargarh, dated 7th April 1881.

Letter from Commissioner of Settlements and Agriculture, to Senior Secretary to Financial Commissioner, No. 340, dated 2nd December 1882, forwarding the same.

Letter from the Senior Secretary to Financial Commissioner, No. 687, dated 1st June 1883, submitting the above Report and letter.

RESOLUTION.—The Muzaffargarh District is bounded on the east by the Chenab, on the west by the Indus, and on the north by the southern portion of those parts of the Dera Ismail Khan and Jhang Districts which lie between these rivers. In shape it resembles a long narrow triangle, of which the base rests on the northern boundary and the apex is situated at the extreme southern point at the junction of the two rivers. With the exception of the sandy Thal lying to the north on higher ground all the lands comprised in the district are composed of an alluvial soil of recent formation, intersected by old channels of the rivers and canals, and more or less liable to annual inundations, of which those from the Chenab are nearly always beneficial, while those from the Indus often do as much harm as good. The Thal is a sandy desert fairly level in the west, but ending in a confused mass of ridges and hillocks on the east. The tract slopes downwards from the Indus to the Chenab, and the latter river lies 37 feet lower than the former on the northern border of the district: at no very distant date the Indus appears to have flowed down the centre of the Thal. This tract forms the principal grazing ground of the country, and as soon as the rain falls each year excellent grass springs up all over it. Unlike the wastes of Thal and Bár in other districts, it is dotted over with plots of cultivation in most parts, and immense tracts destitute of cultivation are rarely met. Part of the lowland is annually covered by the river floods, and part is protected by embankments and irrigated by inundation canals, which usually run from April to September. The district is thus divided into three natural zones,—the Thal, the canal country, and the alluvial tracts. The total area is 3,137 square miles. Subject as so much of the land is to the action of the rivers, the cultivated and

culturable area necessarily varies from year to year. According to the measurements of the last settlement, the cultivated and fallow area amounted to 24 per cent., and the culturable to 46 per cent. of the whole. The average rain-fall is only 6 inches, and nearly the whole of the cultivation is therefore dependent on irrigation of some kind. About 120,000 acres are inundated by the rivers, and about 200,000 acres are irrigated by canals alone, or by canals assisted by wells. An excellent description of the canals and of the embankments by which the canal tracts are protected from the river floods is given by the Settlement Officer in pages 14—24 of his Report. Only in the higher parts of the central Thal are wells used unassisted by canals; and the area irrigated by wells alone is only 24,632 acres. The district is divided into three tahsils, of which Sinánwán lies to the north, Muzaffargarh in the centre, and Alípur at the south. The only other fact connected with the physical advantages of the district which calls for notice is that the soil is peculiarly suited for date trees, of which the fruit forms the staple food of the people in July and August. An interesting account of the trees, fodder plants and fauna of the district is given by the Settlement Officer in pages 27—43 of the Report.

2. In early times Muzaffargarh was held by Sumra and Summa Rájpúts and after them by the local dynasties of the Langás and Náhars, the latter of whom ruled for nearly 300 years in Sítpur. Towards the end of the 18th century the country was divided between the rulers of the neighbouring tracts. The northern portion was held by the Thal Nawábs, of whom Muhammad Khán of Mankera was the most notable; the eastern part was under Muzaffar Khán, Governor of Mooltan, who founded the town of Muzaffargarh; the west was controlled by the rulers of Dera Gházi Khan; and the south by the Nawábs of Baháwalpur. It was not until Díwán Sáwan Mal was appointed Governor of Mooltan by Mahárája Ranjít Singh in 1829 A. D. that the whole district came under a single ruler. Mr. O'Brien's Report contains an excellent account of the method of government adopted by the Díwán. His assessment was undoubtedly heavy, and where the actual revenue was light the amount was made up by levying extra cesses; while if the revenue was heavy the cesses taken were few. Nevertheless his rule was popular and is remembered with affection by the people to the present day. The principal reasons of this are that

the Dīwán insisted on every one having his rights, and took care to improve and extend irrigation, and to maintain the dams which are so necessary for the safety of the cultivated lands and the proper working of the canals.

3. The population of the district according to the census of 1881 consisted of 338,605 persons, of whom seven-eighths are Muhammadans. The rate of population per square mile of cultivation is 447, but the incidence per square mile of the total area is only 108. About half the land is owned by Játs, and the remainder by Bilúches, Syads, Kirárs and others. The Játs really represent a whole congeries of various tribes, and are even held to include Rájpúts. Certain tribes, such as the Jhabels, whose origin is from Sindh, Mors, Kihals, Kutáwas and Labánas, are to a large extent peculiar to the district. The people are fair agriculturists, but they are also among the most superstitious in the whole of the Punjab, and their standard of morality is lamentably low.

4. The tenures of Muzaffargarh resemble those of the Cis-Indus portion of the neighbouring district of Dera Ismail Khan. There are superior proprietors who take certain dues from the inferior proprietors, and enjoy special rights in the waste lands, and inferior proprietors who are the real holders of the land and the revenue payers. The former are in many cases the descendants of persons who occupied large grazing tracts at the time when most of the district lay waste; they are known to the people as zamíndárs and mukaddams, and in the Government record as málíkán ála. The dues paid to them by the inferior owners amount to Rs. 1-12-0 per cent. on the land revenue; in some cases they also levy an institution fee, jhuri, when land is broken up. The inferior proprietors, formerly called riáya or chakdárs (from the wells sunk by them), but now known as málíkán adna, received their lands either from the superior proprietors on payment of a small fee, or obtained grants direct from the rulers of former times, who encouraged the extension of cultivation without much regard to the rights of any prior claimants. The present settlement has been made with the inferior proprietors in every case. The estates are usually mere collections of wells without any connection with each other, grouped together into villages for administrative convenience, in the same way as the villages were grouped into talúkas for revenue purposes.

5. Until the time of Dīwán Sáwan Mal, the revenue was usually collected in kind, but that ruler introduced the system of commuting the Government share of the crop into cash at a rate usually 25 per cent. above the market price, and requiring the cultivators to take it back and pay the value of it into the treasury. The share of the crop taken by the Sikh Government, mahsúl, varied from one-sixth to one-half. Where it was small, the amount, as already explained, was made up by cesses ; where it was large, the cesses imposed were light. An interesting list of the cesses levied will be found at page 86 of the Report. Certain crops were assessed at cash rates, and isolated wells unassisted by the canals were often leased on a rental which was nominally fixed, but which was really enhanced in many indirect ways. In fact, the assessments were adjusted, as Mr. O'Brien points out, on a minute local knowledge of the capabilities of each well and estate ; and hence it came to pass that a revenue demand which would now be considered exceptionally severe was, under the patriarchal system of administration adopted by the local rulers, paid by the people with comparative ease.

6. The rent realized by owners from their tenants, "lichh" or "kasúr," generally amounted to one-seventeenth of the gross produce ; the remainder after payment of the Government revenue and all miscellaneous dues was called rahkam, and was taken by the actual cultivator of the land. The inferior proprietors now take both the "lichh" and the "mahsúl," and are directly responsible to the Government for the revenue. All trees of every kind were considered by the Sikhs to belong to Government, and the whole of the date crop was taken by the State. A poll tax was levied on artisans and cattle, and heavy town and transit dues were realized from traders. All these were done away with at annexation ; and as the Government revenue now represents a much smaller share of the gross produce than the old "mahsúl" did, it might be expected that the proprietors would be better off than they used formerly to be. The Financial Commissioner shows, however, that, having been treated as children by Dīwán Sáwan Mal, they fell into difficulties as soon as they were wholly released from leading-strings, and actually preferred the harder terms of the Sikh revenue system, under which Government aid was freely given to help the people to manage for themselves, to the easier conditions of the British Government, which left them

to direct their own affairs to an extent for which they were hardly fitted. No doubt the main reason of the inability of the villages to combine for corporate action lay in their constitution, in which the strong link of brotherhood, which is so characteristic of all communities in the Punjab, except in the south-western corner, was entirely wanting.

7. According to the returns of the recent settlement the area cultivated by tenants amounts to 169,000 acres, or to more than one-third of the total area under cultivation. On 97,000 acres rents in kind alone are paid, the rates being one-half in the case of 18,000 acres, one-third in the case of 45,000 acres, and one-fourth in the case of 30,000 acres. Tenants who have brought land under cultivation by clearing jungle (mundhiniár and butimár) have, it is stated, usually been recorded as possessing occupancy rights, but no details are furnished by the Settlement Officer. Mr. O'Brien notes, however, that land is so abundant that the occupancy status has no attraction for tenants, and that they prefer not to be tied down to their holdings in any way.

8. A good description of the people, their superstitions and amusements is given by the Settlement Officer in Chapters III. and IV. of the Report, and the account of the agriculture of the district in Chapter V. is an excellent one. Wheat is grown on more than half the area under crops and forms the staple food of the people. According to the analysis of the various specimens of Punjab wheat which were forwarded to England for examination, the wheat of Muzaffargarh is among the best of the Province. Cotton occupies 8 per cent. of the cropped area, and indigo, jowár and peas about 6 per cent. each. The Lieutenant-Governor would be glad if the Director of Settlements and Revenue Records would take into consideration Mr. O'Brien's remarks on page 77, regarding the slovenly preparation of indigo, with a view to deciding whether it is not possible that some improvement should be effected in the method of manufacture.

9. Immediately after annexation a summary settlement was carried out by Captain Hollings in the north which was then attached to the Leiah District, and in the south by Mr. Wedderburn, Lieutenant Farrington and Lieutenant James. The fact that the cesses taken by the Sikhs had been levied at varying rates according to the incidence of the revenue was not recognised at that time, and their indiscriminate

remission caused the new revenue, which was based on the former collections of land revenue proper, to fall very unequally on different parts of the district. The people were unaccustomed to manage for themselves, and their embarrassments were greatly increased by the extraordinary fall in prices which took place shortly after 1849. The result was that the first summary settlement proved a disastrous failure. A second settlement was made in Tahsíl Sinánwán by Mr. Simson in 1854, and in the rest of the district by Captain Graham in 1857. The former gave a reduction of $10\frac{1}{2}$ per cent., but Captain Graham increased the assessment, which was already oppressive, by 6 per cent. in Tahsíl Muzaffargarh, and 21 per cent. in Alípur. Even the reduced assessment of Sinánwán was found to be too heavy, and the settlement of the other two tahsils completely broke down. Finally, a third summary settlement of the whole district was made in 1860 by Lieutenant Tighe. A further reduction was allowed in Sinánwán and Muzaffargarh, and in Alípur the assessment was put back to the amount at which it stood before the revision by Captain Graham. The revenue of each tahsíl then fixed was as follows :—

Muzaffargarh	...	...	...	Rs. 2,20,592
Alípur	...	...	...	„ 1,41,042
✻ Sinánwán	...	...	...	„ 1,08,660
Total				Rs. 4,70,294

Mr. O'Brien shows that this assessment would in all probability have worked well if sufficient attention had been paid to the clearance and repairs of the canals, if a new distribution of revenue in villages had been sometimes allowed, and if there had not been disastrous floods in 1871 to 1874. As it happened when the regular settlement was commenced in 1873 the progress made by the district since 1860 was found to have been wholly inadequate, and such as to justify only a very moderate enhancement of the land revenue.

10. The stability of the revenue administration of Muzaffargarh depends almost entirely on the proper working of the canals. This fact was not properly realized for many years, and it was not until the operations of the present settlement were in progress that steps were taken to place the subject on a satisfactory footing. After a full consideration

of the whole question it was decided that it was quite impossible for the Deputy Commissioner to give sufficient attention to the management of the irrigation arrangements of the whole district, and it was therefore determined to place them under the Irrigation Department of the Province. A new division of the Muzaffargarh canals was accordingly created and placed under an Executive Engineer, who, as regards their revenue management and the working of the *chher* system, is subject to the control of the Deputy Commissioner. The results of this change of system have been most satisfactory, thanks to the excellent work done by Mr. O'Brien, and Mr. Sibold, Executive Engineer, as may be seen from the figures given in the review of the Settlement Commissioner. For whereas the area irrigated by the canals in the last year of the old management was 180,813 acres only, two years afterwards it had risen to 219,130 acres, and in 1882-83 rose further to 249,400 acres. There is no doubt that canal irrigation in the Muzaffargarh District is capable of very great development, and the Lieutenant-Governor feels sure that no efforts will be spared to promote its extension in future. The subject of the *chher* clearances, and the important place which they hold in the district system of irrigation, will be noticed below.

11. The first regular settlement was begun in 1873, and was carried out entirely by Mr. E. O'Brien. The report submitted by that officer, though an excellent one in other respects, contains a very meagre description of the new assessment and of the date on which it was based. This is to be regretted ; though as the assessment reports of all the three tahsils have been printed in full, it may be hoped that the omission will not cause any practical inconvenience to the local officers. The result of the settlement was as follows :—

		<i>Old revenue. New revenue.</i>	
		Rs.	Rs.
Land revenue...	...	5,04,970	5,24,468
Grazing	...	34,623	33,388
Dates	...	11,503	19,226
Total		5,51,096	5,77,082

The assessment was based principally on produce estimates. The yield of the chief crops was ascertained by careful enquiries and experiments, and their value was then

estimated on the basis of the average wholesale prices of the past 23 years. The owner's share of this value was next calculated in accordance with the system in force in the district, and half of this share was assumed as the standard of the Government assessment. Rates were then devised for the various classes of irrigation, and in accordance with these the revenue demand of each circle and estate was worked out. The process adopted by Mr. O'Brien is fully explained in his assessment reports and in the reviews of these, although the bare results only are stated in the final report. The assessment circles were framed with regard to the means of irrigation prevailing in them, and the average rates adopted for each class of irrigation were generally as follows :—

		<i>Per acre.</i>					
		Rs. A. P.		Rs. A. P.			
Flooded lands ...	...	0	13	0	to 1	1	0
Flooded lands assisted by wells ...	...	0	14	0			
Lands irrigated by wells and canals		1	8	0	to 1	12	0
Lands irrigated by canals alone ...	...	1	4	0			
Lands irrigated by lift (jhalárs) ...	...	1	2	0	to 1	4	0
Lands irrigated by wells alone ...	...	1	2	0	to 1	4	0

Where lands irrigated by floods are also watered from wells, an additional lump assessment, varying from Rs. 6 to Rs. 9, was imposed on the latter. These rates were very carefully considered at the time, and Sir Charles Aitchison sees no reason to question their adequacy, due allowance being made for the precariousness of much of the irrigation, and for the danger to which the lands and wells are liable from sudden and severe floods.

The half net assets estimate, the assessment by revenue rates, and the revenue finally fixed for the district, are compared in the following table :—

TAHSIL.		Half net assets esti- mate.	Assessment by revenue rates.	Revenue estimates fixed.
		Rs.	Rs.	Rs.
Muzaffargarh ...	...	3,25,499	2,52,135	2,51,302
Alipur ...	...	1,68,415	1,53,174	1,50,385
Sinánwán ...	...	1,33,341	1,19,604	1,22,781
Total	...	6,27,255	5,24,913	5,24,468

Adding to this Rs. 5,000 as the probable sum for which the Government rakhs will be leased, the total new revenue amounts to Rs. 5,82,082, giving an increase of Rs. 30,986 (not Rs. 32,986, as stated by the Settlement Officer), or rather less than 6 per cent. This is far below what might have been anticipated, and is due, as has been stated above, to the somewhat unsatisfactory revenue administration of the district in the past. Owing, however, to the fluctuating system of assessment, an increase of Rs. 25,000, as will be explained below, has already taken place over and above the demand estimated by the Settlement Officer. Taking this into account, the net increase of revenue derived from the present settlement amounts to 12 per cent. of the old demand.

12. The most important operations carried out by the Settlement Officer were—

- (1). The revision of the rakh demarcation.
- (2). The introduction of fluctuating assessments on lands subject to river floods.
- (3). The arrangements for the proper management of the canals and more complete organization of the *chher* system.
- (4). The arrangements for the future relief of estates in case of the failure of canal irrigation.

These subjects are fully dealt with by the Financial Commissioner in his review, and it will be sufficient to notice them very briefly in the present place.

13. The old rakhs had been demarcated on entirely wrong principles, and the hardships which were thereby entailed on the villagers necessitated a complete revision of the boundaries. The result of the new demarcation was to reduce the area of Government rakhs to less than one-third of that previously included within their limits, but the portion retained, amounting to 311,554 acres, is now entirely free of encumbrances. The rakhs are managed in accordance with rules drawn up under Section 48 of Act IV. of 1872 (The Punjab Laws Act), and the grazing revenue derived from them is already far greater than was realized under the old system.

14. Among the principal causes of the ill success which has attended the past settlements of the Muzaffargarh District has been the too great rigidity of the revenue system applied to the riverain lands. These, as explained by the Settlement Commissioner, are not really under the command of the cultivator; and in order to counteract the effects of the exceedingly capricious action of the rivers, it was decided to place these lands under a fluctuating assessment at the present settlement, as has been done in Bannu, Dera Ismail Khan and Mooltan, and in part of the Jhang District. Accordingly, the area subject to the influence of the floods is measured and assessed yearly, and so far the system has proved equally popular with the people and advantageous to the State, the revenue realized under it during the last four years having been Rs. 1,45,900, Rs. 1,48,800, Rs. 1,60,500, and Rs. 1,71,300. As the area in question comprises no less than 120,000 acres, the extra labor which is thrown on the subordinate revenue staff by the system is very great, and it has already been found necessary to strengthen the Kánungo establishment and to appoint an additional Náib-Tahsildár to assist in the work of the Sinánwán Tahsíl. Hitherto the working of the system has proved most successful. But the continuance of the present satisfactory state of things depends entirely on the efficiency of the revenue staff of the district, and the Lieutenant-Governor trusts that no efforts will be spared by the Commissioner of the Division and the District Officer to see that this staff is thoroughly acquainted with its duties, and that it performs them promptly and efficiently.

15. The irrigation from canals in Muzaffargarh may be termed fairly permanent in comparison with that from river floods, and it was not considered necessary to place the canal lands under a fluctuating assessment. Experience in the past in the Mooltan and Muzaffargarh Districts had shown, however, that it was desirable to lay down rules for the granting of remissions of revenue on occasions of failure of canal irrigation, and this has been accordingly done in both districts. The rules approved by the Local Government for the above purpose are detailed by the Settlement Commissioner in paragraph 11 of his letter recited in the preamble, and the present settlement is sanctioned subject to the observance of their provisions in all cases. Hitherto no remissions have been found necessary, and, as pointed out by the Financial Commissioner, the system has this advantage that a

decline in the revenue will immediately attract the attention of the higher Revenue authorities of the Province to the imperfect working of the canals. Lands to which canal irrigation may be extended hereafter will be charged at a rate of 6 annas per acre in the Sinánwán Tahsíl, and of 8 annas per acre in the other two tahsils. A *pro formâ* credit of two-thirds of the assessment of lands watered by canals and wells, and of the whole of the assessment of lands watered by canals alone, is taken by the Irrigation Department ; the whole of the income, however, is actually credited in the accounts as land revenue, and is shared under the present Provincial contract by the Supreme and Local Governments in the proportion of 60 and 40 per cent.

16. The annual clearances of the canals on which the prosperity of the district so greatly depends are effected by the people themselves under the direction of the officials of the Revenue and Irrigation Departments and of the Canal Committees. No charge, therefore, is made for the use of canal water over and above the demand on account of land revenue. A good description of the general features of the system of clearances called *chher* is given by the Settlement Officer at pages 100—102 of his Report. The most important points embodied in the *chher* rules, as finally revised and attached to this Resolution, are as follows. The total *chher* assessment of each canal will be fixed by the Divisional Canal Officer in September of each year in consultation with the Committee of the Canal. The assessment will be based for the most part on a consideration of past assessments, and will be expressed in the form of so much *chher* labor for each acre irrigated by the canals during the current autumn harvest and the ensuing spring harvest. For each canal a committee, or sarpanch, will be appointed. Every committee man must possess certain qualifications, and will be appointed for five years. Two-thirds of the number of the committee will be selected in the same way as Revenue Zaildárs, that is to say, with regard to the votes of the village headmen as well as to personal claims, and one-third may be appointed without taking votes. The duties of the committee men are to supervise the clearances of the canals, to keep a record of the laborers present at the work, and to help the Canal Officer generally in all matters connected with the administration of the canals. They are remunerated by a remission of *chher* labor due on account of their own land

irrigated by the canals. Each irrigator is bound to furnish labor at the place and time intimated to him, and if he fails to do so he is liable to pay a commutation fee of 8 annas per man per diem. These fees are credited to a canal fund known as the Zarinágha Fund, from the proceeds of which works for the improvement of the canals, but not original works, may be undertaken. Any irrigator can appeal against his assessment to *chher* labor, and may petition for remission of land revenue due to the canals when the canals have failed to work. If the number of laborers called out in the first instance is not sufficient to complete the work of clearance, a further levy of laborers may be made, but in that case the laborers called out are paid 4 annas per diem. Special calls for laborers may be made without payment on occasions of urgency during the irrigating season. It is not necessary perhaps to add more on the subject of *chher* labor in the present review. The whole facts of the case as regards the Mooltan District were reported to the Government of India in 1879, and in the letter of the Department of Home, Revenue and Agriculture, No. 408, dated 19th August of that year, the conclusion was accepted that the system was one peculiarly suited to the circumstances of the Punjab, and that it was most desirable to continue it, provided precautions were taken to prevent the recurrence of certain abuses which had crept into the working of the system in the past. The *chher* rules of the Mooltan District have since been formally approved by the Government of India. The rules for the Muzaffargarh District are based mainly upon these, but they have not hitherto been submitted to the Supreme Government. The reason of this is that there is much in the rules which was new as regards Muzaffargarh, and it was considered advisable that they should be worked experimentally before they were formally sanctioned. The rules have been accepted by the land-owners and irrigators of the district, and an entry has been made in the administration paper of each village by which the people have bound themselves to observe the conditions of them. The present settlement will accordingly be sanctioned subject to the observance of the above engagements.

17. Zaildárs were appointed throughout the district during the settlement; they are remunerated by a deduction of 1 per cent. from the land revenue, and by special ináms

aggregating Rs. 3,310. The assigned revenue is very small, as may be seen from the following table :—

	Rs.
Jágir	2,174
Máfis	1,405
Pay and ináms of Zaildárs	8,950
Total ...	<u>12,529</u>

The cess for the payment of Patwáris has been fixed at rates varying from 3 to 6 per cent. in different parts of the district. It is satisfactory to note that of 191 Patwáris, 120 are residents of Muzaffargarh, and that 42 come from the neighbouring districts. The Lieutenant-Governor fully concurs with the Settlement Officer that, provided the establishment of cliques be avoided, it is desirable that residents of the district should as far as possible be appointed to the post of Patwári.

18. The settlement lasted $7\frac{1}{4}$ years. If allowance be made, however, for the delay in communicating orders on the assessment reports, the duration was not in excess of that of most recent settlements, *viz.*, six years. The cost from Imperial Funds was Rs. 3,97,450, so that, estimating the increased revenue at Rs. 50,000 per annum, the expenditure will be recovered in eight years. The term of the settlement has already been fixed at 20 years in the orders of Government issued upon the assessment reports. Considering the very small increase in the cultivated area which has taken place since the beginning of British rule, and the very large culturable area which it may be hoped will be gradually brought under the plough as irrigation extends, Sir Charles Aitchison agrees with Sir Robert Egerton that it is not desirable to sanction the settlement for a longer period than 20 years. The settlement is accordingly sanctioned for that period, together with the record of rights, subject to the observance by the revenue payers (1) of the new rules for remissions of canal revenue, and (2) of the rules for the working of the *chher* system.

19. No mention is made by the Commissioner of Settlements and Agriculture, or by the Financial Commissioner, of the village note-books prepared at the late settlement. The Lieutenant-Governor will be glad to be assured that these were drawn up in a satisfactory manner, and that they have been duly maintained by the District Officer. His

Honor notices that it is stated by Colonel Wace that the settlement measurements were good, and that the record of rights has been well put together.

20. Sir Charles Aitchison agrees with the Financial Commissioner that Mr. O'Brien is entitled to the thanks of Government for a thorough and excellent settlement by which, there is every reason to hope, the future revenue administration of the district has been placed on a sound basis, and for a most interesting report. It is to be regretted that the report should show signs of incompleteness in some respects, and His Honor trusts that the Financial Commissioner will arrange for the addition of a table of contents and an index before it is issued. The thanks of Government are also due to Kázi Ghulám Murtaza, Extra Assistant Settlement Officer, and to Munshís Bhagwán Dás and Sheikh Súba for the assistance rendered by them to the Settlement Officer. The Lieutenant-Governor also desires to again record the obligations of the Punjab Government to Mr. J. B. Lyall (now Resident of Mysore), under whose supervision the settlement was for the most part carried out.

ORDER.—Ordered that the above Resolution be communicated to the Financial Commissioner, Punjab, for information and guidance, and to Mr. O'Brien for information. Also that the Resolution and the papers read in the preamble be submitted to the Government of India in the Department of Revenue and Agriculture for confirmation of the term of settlement for a period of twenty years.

APPENDIX.

MUZAFFARGARH CANAL RULES.

WHEREAS, in accordance with certain provisions contained in the administration papers of certain villages situated in the district of Muzaffargarh, Government has authority from time to time to frame rules for the management and maintenance of certain irrigation works in that district, the following rules have been sanctioned by the Local Government :—

The following canals of the Muzaffargarh District under the charge of the Executive Engineer, Muzaffargarh Division, are canals within the meaning of Act VIII. of 1873 :—

INDUS CANALS.

The Gharku.	The Purán.
„ Magassan.	„ Suráb.
„ Maggi.	„ Sulemán.
„ Adil.	„ Kabír.
„ Ghutthu.	

CHENAB CANALS.

The Karam.	The Ghazanpur.
„ Ganesh.	„ Jhangawar.
„ Taliri.	„ Ali Khali.

1. In these rules the word “canal” means any one of the above canals inclusive of its river supply channels and all its branches for the maintenance of which *chher* labor is leviable. It also includes all subsidiary works which are necessary to the protection of the irrigated land, or to the regulation of the water-supply, such as embankments, regulators, and escape channels. Where such subsidiary works are common to more than one canal, the demand for their maintenance may be apportioned among the said canals in such manner as the Deputy Commissioner deems fit.

2. The Superintending Engineer of the circle for the time being shall be the Superintending Canal Officer; the Executive Engineer of the Muzaffargarh Division shall be the Divisional Canal Officer; and the Deputy Collector shall be the Sub-Divisional Canal Officer, as defined in Act VIII. of 1873, Section 3, item 7.

3. All establishment employed on these canals shall be under the control of the Divisional Canal Officer, subject to his departmental superiors, and to such rules as may from time to time be issued by the Local Government in the Irrigation Department.

4. In accordance with ancient custom, and by the wish of the people, it is one of the conditions of settlement that the canals shall be maintained by “*chher*” labor, that is by

labor supplied by the irrigators, and that in the event of non-attendance a cash commutation shall be levied. The laborers provide their own tools. They are locally known as "*chheras*," and the cash commutation as "*zar-i-nāgha*." The cash commutation for non-attendance shall, as at present, be eight annas per man per diem till further notice.

5. In the case of the Government canals divided into sections for purposes of local employment, but not for those of assessment, jurisdiction of committees, or other administrative arrangements, and which are detailed in Appendix I. of these rules, the *chheras* required from any branch of one section shall not be required to work on the branches of any other section, but they may be employed on any branch within the section from which they have been called out, and on any channels through which water is supplied to such section. Except as above provided, the *chheras* called out on any canal may be employed on any part of that canal.

6. There will be, as heretofore, one *Zar-i-nāgha* Fund for all the canals of the district. Into this fund all receipts on account of the cash commutation and of sales of wood, grass and dates from date trees not assessed to land revenue from the canal banks shall be paid, and from it all expenditure will be made without regard to the income and expenditure for the time being of any particular canal.

The *Zar-i-nāgha* Fund shall be devoted solely to the following purposes: first, it shall be ordinarily expended in assisting the *chher* laborers in clearing the canals, strengthening embankments, repairing breaches, cutting down spoil banks, correcting the slopes of beds or alignment of the canals, making escapes, and digging new heads; secondly, if the funds are sufficient, it may be expended in building regulators, making and maintaining plantations on the canal banks, and in the construction and maintenance of works to protect canals or canal land from river floods. It shall not be employed in making new canals or extensions of existing canals.

(NOTE.—In calculation of the amount of *chher* labor annually required for the clearances and of its distribution among irrigators, one *chher* means in Muzaffargarh the labor of one man for one day, not, as in Mooltan, the labor of one man for the whole period of *chher* labor. The primary calculation is in fact made in single day's labor, not in 90 days' labor.)

A *chher-guzar* means the person (whether owner or tenant) interested in the irrigation who by custom or agreement is in each instance liable to supply the *chher* labor.)

7. The Superintending Engineer shall at the commencement of each official year, apply to the Local Government in the Irrigation Department to place at his and at the Divisional Officer's disposal such sums as he may consider will probably be required during the year from the *Zar-i-nágha* Fund.

The allotments thus applied for having been granted, the Superintending and Divisional Officers may sanction expenditure within those amounts. The limit of sanction for any particular work shall be that prescribed in the Public Works Code rules relating to expenditure from revenue ordinary for new works and repairs respectively.

8. (i) There shall be appointed to each canal a committee of sarpanches, of which the numbers shall not be less than is stated below against each canal:—

<i>Canal.</i>	<i>Minimum number of Sarpanches.</i>			
The Gharku	3
„ Magassan	8
„ Maggi	13
„ Adil	2
„ Ghuthu	7
„ Puran	6
„ Suráb	2
„ Sulemán	2
„ Kabir
„ Karam	2
„ Ganesh	2
„ Taliri	4
„ Ghazanpur	1
„ Jhangawar	2
„ Ali Khali	2

The minimum above stated may be revised from time to time under orders of the Chief Engineer of Irrigation.

(ii) The appointment of sarpanches shall rest with the Divisional Canal Officer and Deputy Commissioner acting jointly together. And in selecting men for these duties up to the minimum limit above fixed for each canal, the said officers shall follow (as nearly as may be) the procedure for the time in force for the appointment of revenue zaildárs.

- (iii) On each canal the said officers may appoint, without taking the votes of village headmen, an additional number of sarpanches not exceeding half the minimum above stated.
- (iv) No person shall be appointed a sarpanch under Clause (ii) above, unless he holds not less than 100 acres of land irrigated by the canal to which he is appointed ; nor shall any person be appointed under Clause (iii) unless he holds at least half the said area. Nor shall any patwári or other person holding service under Government in the district be appointed.
- (v) On the canals named in Appendix I., the Deputy Commissioner will decide how many of the sarpanches to be appointed under Clause (i) of this rule shall be elected from each of the canal sections stated in the said Appendix ; and the elections on those canals shall be by canal sections. The sarpanches to be appointed under Clause (iii) of this rule shall be similarly distributed over the sections of the said canals.
- (vi) Differences of opinion arising between the Deputy Commissioner and Divisional Canal Officer under this rule shall be referred for the orders of the Commissioner, whose decision shall be final.
- (vii) Every sarpanch's appointment under this rule shall be for five years, but his tenure of office may be extended, at the discretion of the Divisional Canal Officer, for a period not exceeding four years more. A sarpanch, whose tenure of office has expired, may be re-elected or reappointed.

9. Canal sarpanches shall discharge their duties under the direction and control of the Divisional Canal Officer ; and with the concurrence of the Deputy Commissioner may be removed by him for negligence, incompetence, or misconduct. The Divisional Canal Officer shall record briefly, in English and Vernacular, his reasons for such removal, An appeal from his orders shall lie to the Commissioner. whose order shall be final.

10. The duties of the members of the committee of a canal are :—

- (i) To attend in person during the clearances in such numbers and order as the Divisional Canal Officer may direct. The members thus present shall verify and sign the daily lists of those present as heretofore, which shall then be submitted to the Divisional Canal Officer.
- (ii) To assist the Divisional Canal Officer with their advice on all matters regarding the management of the canals, especially as to dates and places of employment of the *chher laborers* and all questions connected with clearances, the use of *chaps*, the distribution of water and the calling of the *chikar-chheras*.
- (iii) To report to the Divisional Canal Officer all instances of neglect or misconduct on the part of the moharrirs and mimhars in the performance of their duties, and to assist in the appointment of these officers by bringing to notice the names of suitable and competent persons. The committee shall also possess a right to veto all first appointments to either of the above offices on satisfactory cause being shown.
- (iv) The opinion of the committee on all points referred to it shall be reduced to writing, and when the Divisional Canal Officer over rules it, as he is hereby empowered to do, he shall record his reasons for so doing.

11. (1) Each member of a committee who performs his duties to the satisfaction of the Divisional Canal Officer will be entitled to have 180 *chheras* per annum exempted from attendance out of the number due on his own holding. The number thus exempted shall be deducted from the total number of *chheras* fixed for the canal.

(2) This exemption may be cancelled by the Divisional Canal Officer in case of neglect of duty, and the orders of the Divisional Canal Officer in this matter shall be final.

(3) No member of the committee shall be allowed a remission of a greater number of *chheras* than that at which he has actually been assessed.

12. The number of *chheras* required on each canal for the clearances of each year shall be estimated in the month of September by the Divisional Canal Officer in the following manner :—

(i) He shall add up—

- (a) the whole number of ordinary *chheras* who have actually worked on the canal during the three previous clearance seasons ;
- (b) the number of *chheras* remitted to sarpanches during the same time ;
- (c) the number of supplementary *chheras* employed on the canal under Rule (21) during the previous 36 months.

(ii) The total thus obtained he will divide by 3 ; and add to the result.

- (a) the number of *chikar-chheras* called out during the past hot weather ;
- (b) the number of *chheras* employed in watching the embankments connected with the canal during the previous hot weather.

(iii) The Divisional Canal Officer will then consider this corrected total (ii) in consultation with the committee of sarpanches, and he may reduce or enhance this total by a sum not exceeding one-fifth with reference to the then condition of the canal and the probable requirements of the working season. The sum so fixed will be the total *chher* assessment of the canal for the coming season.

(iv) Having thus arrived at the total *chher* assessment of the canal, the Divisional Canal Officer will add up the total acres irrigated by the canal during the three years ending with the previous rabi, and dividing this area by 3 he will assume the result to be the average area of irrigation.

- (v) He will then divide the total *chher* assessment by the average area of irrigation, and declare the result to be the rate per acre irrigated chargeable for the coming season to each *chher-guzár*.

(NOTE.—In calculating the rate, fractions of units shall be stated in the nearest chitak.)

- (vi) This *chher* rate shall be communicated by him through the tahsildár to each patwári concerned not later than the 10th October. And a list showing the *chher* rate declared for each canal shall at the same time be furnished to the Deputy Commissioner.

13. (i) It shall be the duty of the Deputy Commissioner and his revenue establishment to distribute the total *chher* assessment thus declared for each canal over its *chher-guzárs* in the following manner :—

Of the distribution of the *chher* assessment on each holding.

(ii) The distribution shall be reckoned on the area irrigated by canal water in the current kharíf and coming rabi.

(iii) For each irrigating village the patwári shall prepare in duplicate a list in the form (or other similar form prescribed for that purpose) given in Appendix II. of these rules, showing for each *chher-guzár* the area in respect of which he is liable to contribute *chher* labor during the coming season, and the total *chher* labor due thereon at the rate fixed by the Canal Officer.

(iv) One copy of this list shall be sent by the patwári to the tahsildár not later than 1st December. And the tahsildár shall immediately on receipt thereof forward it to the Divisional Canal Officer. The tahsildár is responsible for the correctness of the lists thus forwarded by him.

(v) The patwári, when forwarding the said list to the tahsildár, shall attach to it, for distribution to the *chher-guzárs*, under Rule 15, parchas duly written and filled up on forms supplied to him for this purpose by the Divisional Canal Officer.

14. (i) Any *chher-guzár* may demand from the patwári in advance of receipt of the Canal Officer's parcha a memorandum of the entries made by him in the *chher* list described in Rule 13.

Of complaints against the entries in the patwári's list.

(ii) A *chher-gúzár* may complain to the tahsildár or other revenue officer having jurisdiction that the irrigated area of his own or other holdings has been recorded incorrectly by the patwári.

(iii) The Deputy Commissioner shall issue from time to time such orders as are found necessary for the prompt disposal of such complaints by himself or the officers appointed by him in this behalf. And there shall be no appeal from the Deputy Commissioner's orders in such cases.

(iv) The complaints made under this rule may be supported by the patwári's memorandum (clause 1), or by exhibiting the Canal Officer's parcha (Rule 15), but the Canal Officer's parcha shall not in any case be taken out of the possession of the *chher-gúzár*. Nor shall a complaint be refused hearing for want of these documents in support.

15. On receipt of the patwári's list of *chher-gúzárs*, as provided in Rule 13, the Divisional Canal Officers shall cause to be entered on the parchas accompanying the dates and places at which each *chher-gúzár* is required to supply the labor assessed on him and shall distribute the said parchas to the *chher-gúzárs* within 15 days of receipt of the list, either through the patwáris or as may be convenient.

16. The Divisional Canal Officer may, whenever practicable and with the consent of the Canal Committee, assign to the *chher-gúzárs* on any canal or portion of a canal tasks or definite quantities of work to be done in lieu of the *chher* labor for which they have been assessed during the current season. Any *chher-gúzár* failing to complete his task shall be liable to a fine not exceeding double the estimated cost of its completion, which will be paid into the *Zar-i-nágha*. The equivalent in taskwork for one *chher* laborer shall be determined by the Divisional Canal Officer in concert with the Canal Committee before the tasks are distributed.

17. (i) The dates and places for attendance of *chher* labor referred to in Rule 15 shall be fixed by the Canal Officer after consultation with the Canal Committee; provided that the clearances shall usually commence not later than 25th December.

(ii) The *lambardárs* of every irrigating village and the revenue *zaildárs* shall actively exert themselves to secure the attendance of the *chher* laborers at the places and on the dates entered in the *parchas*.

(iii) Every *chher-gúzá*r failing to supply labor at the places and on the dates mentioned in the *parcha* received by him from the Canal Officer shall be charged the commutation rate fixed under Rule 4.

18. (i) All *chheras* shall work under the control of the Divisional Canal Officer.

(ii) The Deputy Commissioner, and his assistants and *tahsildárs* acting under his instructions, may inspect *chher* gangs, their work, and the attendance registers, and may during such inspections inquire into irregularities and complaints. The results of such inquiries shall be submitted to the Divisional Canal Officer.

19. A clear record shall be maintained of the men daily present, and shall be signed or sealed daily by the Committeemen in attendance on the work. A daily report shall also be sent to the Divisional Canal Officer, showing the number of men present on each canal.

20. When a Divisional or Sub-Divisional Canal Officer or a Revenue Officer, authorized under Rule 18, has satisfied himself by personal inquiry on the spot that any *chher* laborer has been idle or insubordinate, he may pass a written order in the register of attendance that one or more day's attendance of such *chher* laborer shall count as non-attendance, and the commutation fee, as in last rule, shall be levied for every such day. The members of the Committee present at the clearances may pass a similar order, provided it is clearly reported in the register and signed or sealed by all the members present, being not less than two.

21. A list showing the commutation money due from each *chher-gúzá*r on account of absentees shall be sent by the Divisional Canal Officer to the Deputy Commissioner at the close of each clearance season, and the amounts charged thereon shall be collected as an arrear of land-revenue, with the first instalment of the *rabbi* harvest, and shall be credited to the *Zar-i-nágha* Fund.

22. If the *chher* work of the year on any canal or section is completed before all the *chher* labor has been employed, the Deputy Commissioner, after consulting the Divisional Canal Officer, may remit the balance of the *chher* demand of that canal or section. Such remission will not be taken into account in reckoning the average on which future assessments will be based.

23. (i) If the *chheras* assessed under Rule 12 are unable to complete on any canal the work of the season, a supplementary levy (locally known as "four-anna *chhers*") can be made with the sanction of the Deputy Commissioner, and shall be declared in the form of a proportional addition to the demand fixed under Rule 13.

(ii) A daily wage of four annas shall be paid from the *Zar-i-nāgha* Fund to every laborer who works on the canal pursuant to this demand.

(iii) Such laborers shall be subject to the same control ; and the same penalty for non-attendance shall be leviable as is provided by these rules for *chheras* assessed under Rule 12.

24. (i) Every canal-irrigated village shall be liable to supply, on demand by the Divisional Canal Officer, special or "hot weather" *chheras* (locally known as *chikar-chheras*) during the irrigating season or after the clearances are completed.

(ii) *Chikar-chheras* may be called out for any of the following purposes :—

Strengthening or cutting through bunds for maintaining the supply in the canals, opening or clearing alternative heads when necessary to maintain the supply, closing breaches in the canal banks, clearance of escape or drainage lines, repairs and maintenance of the flood embankments protecting canal-irrigated land.

(iii) *Chikar-chhers* shall be levied with such regard to the convenience of the whole body of irrigators as the urgency of each case may require. And the Canal Officer will consult the Deputy Commissioner and the Canal Committee, so far as may be possible, with reference to the same urgency.

(iv) No *chher-gúzár* may refuse to supply *chikar-chhers* on the ground that the demand made on it exceeds his proportional share. But in levying during the following cold season the demand assessed under Rule 13, the Divisional Canal Officer shall give credit to each *chher-gúzár* for any *chheras* supplied by him under this rule; the said credit being given by endorsement on the canal parchas before issue (Rule 15).

(v) No wages shall be payable to *chikar-chheras*.

(vi) *Chikar-chheras* shall be subject to the same control; and the same penalty shall be leviable for non-attendance as is provided by these rules for *chheras* assessed under Rule 12.

(vii) The appended statement (Appendix III.) shows for each canal the lengths of existing embankments and escapes or drainage lines for which *chikar-chhers* may be called out. This list will be modified from time to time with the sanction of the Deputy Commissioner and Chief Engineer of Irrigation as the circumstances of each canal may require.

25. The Divisional Canal Officer may during the hot weather require any irrigating village to supply men to watch embankments connected with its canal; and the provisions of clauses (iii) to (vii) of the preceding rule shall apply to all such demands.

26. No change in the old course of a canal, nor any permanent alteration in the irrigation affecting in any way the payment of revenue as fixed at settlement, shall be made by the Divisional Canal Officer without consulting the Deputy Commissioner.

27. (i) Any owner or occupier of a holding who claims a remission of any part of his canal land-revenue assessment must present a written petition to the Deputy Commissioner by the 15th September at latest, after which no such petitions shall be received.

(ii) The Deputy Commissioner will be responsible for the prompt investigation of all such claims, and shall direct a local inquiry to be made and a report submitted by the tahsildár or other officer subordinate to himself whom he may select for the purpose.

(iii) Whenever possible the evidence of the canal subordinate in immediate charge of the canal concerned shall be taken by the officer making the local inquiry, and shall be filed with the record thereof.

(iv) On receipt of the report, whether the Deputy Commissioner considers that a remission of the canal assessment should be allowed or not, he shall forward the file, with a memo. of his opinion, to the Divisional Canal Officer for any remarks he may have to make.

(v) If the Divisional Canal Officer sees no reason to differ, he shall return the file with a note to that effect. If, however, from his knowledge of the working of the canal he is disposed to doubt the correctness of the facts reported, or of the Deputy Commissioner's conclusion, he may make any investigation he thinks necessary, and then return the files to the Deputy Commissioner with a statement of opinion.

(vi) On receipt of the Canal Officer's reply, or after making such further enquiry as he may think fit, the Deputy Commissioner will pass his final orders rejecting the claim or directing a proposal for remission to be entered in the annual statement to be submitted for the Financial Commissioner's sanction.

(vii) The Canal Officer shall be informed of the order thus passed, and of any others subsequently received from superior authority.

(viii) In all such cases the Deputy Commissioner may suspend the collection of any demand for canal revenue that may fall due before the procedure above laid down can be completed. Such suspension orders will be subject to the same rules in respect of sanction and control of the Commissioner as are provided for the suspension of land-revenue. And notice of all such orders shall be given to the Divisional Canal Officer.

28. Any *chher-gūzār* on whom commutation money has been assessed under these rules may apply to the Deputy Commissioner for its remission or suspension. Such petitions shall be referred to the Divisional Canal Officer for inquiry and report. And final orders thereon shall be passed by the Deputy Commissioner after receipt of that report and after such further inquiry by the Deputy Commissioner as each case may require. But so far as the Deputy Commissioner's

decision depends on the question of attendance or non-attendance of *chher* laborers, he shall be guided by the facts found by the Canal Officer.

29. Before water is given to a village previously unirrigated by any canal, the Divisional Canal Officer shall take an agreement in writing from the village to abide jointly and severally by the provisions of these rules and of any others for the time being in force ; and also to pay water advantage on newly irrigated land according to the conditions prescribed at settlement in villages adjacent. And such agreement shall further stipulate that if the village or any of its irrigators shall make default in respect of the matters entered therein, the Canal Officer shall have authority either to stop the supply of water or to levy a canal occupier's rate, within the meaning of Section 36, Act VIII. of 1873.

APPENDIX I.

CANALS DIVIDED INTO SECTIONS FOR THE PURPOSES
OF RULE 5.

Explanation.—The entries in column 3 include minor branches and alterations of existing channels.

1	2	3	4
Name of Canal.	Section.	Branches included in each section.	REMARKS.
Gharku ...	1st Section ...	Kot Sultan Feeder. Hinjrai. Din Muhammad Dhori.	
	2nd Section ...	Radha. Nangn. Wali. Khan Chand. Panjhatti. Fazl. Otani. Mohan.	
Magassan ...	1st Section ...	Chaudri. Nangni. Nari. Dol. Sirmunni. Kesho. Ganda Bhubbar. Sahju. Soni. Ganda Pirhar. Hala. Pirhar. Baju. Karia Chaudri. Khakki. Nabi.	
	2nd Section ...	Murad. Sirdar. Karia Sananwan. Karia Tej Bhan. Karia Gaman Khan. Muhammadpuri. Khanpuri. Nangni Khurd. Lar Janubi. Nangni Kalan.	

APPENDIX I—*continued.*

1	2	3	4
Name of Canal.	Section.	Branches included in each section.	REMARKS.
Magassan—con- cluded.	3rd Section	<div> <div>...</div> <div> Jan Muhammad. Pir. Hamza. Dogri. Chakar Khan. Karia Khakh. Karia Tibbi Nizam. Chuan. Ghulam. </div> </div>	
	1st Section	<div> <div>...</div> <div> Khudadad. Iishari. Bulla. Sultan Khar. Fazil Kalru. </div> </div>	
Maggi	2nd Section	<div> <div>...</div> <div> Snk, Main Branch. Kot. Karia Khohawar. Karia Gordhan. Wairar. Kori. Haji Ishak. Jakhri. Thal. Bahawal. Gahne. Son. Karia Nusrat. Sirdar. </div> </div>	
	3rd Section	<div> <div>...</div> <div> Dinga, Main Branch. Sirdar Khurd. Kalu Sirdar Kalan. Nang. Chatli. Karkna. </div> </div>	Includes exten- sion to Wali.
Ghatta	1st Section	<div> <div>...</div> <div> Pir. Raj. Rehri. Behishti. Bakht. Azim. </div> </div>	
	2nd Section	<div> <div>...</div> <div> Sirdar. Khandar. Ahmad Shah. Moradpuri. Kiraru. Ghila. Ghulam. Biloch. </div> </div>	

APPENDIX I—concluded.

1	2	3	4
Name of Canal.	Section.	Branches included in each section.	REMARKS.
Puran	1st Section ... {	Bakkhi. Beti. Karkan.	
	2nd Section ... {	Kapra Khas. Khanana. Nimana. Kutab. Murad Shah. Said. Bhagti. Chandr Bhan.	
	3rd Section ... {	Lunda (North). Lunda (South). Sabaya. Pir. Kadra. Bahawal. Khan.	

APPENDIX II.

PATWARI'S LIST OF CHHER-GUZARS.

Referred to in Rule 13.

1 Serial No. in this List.	2 Name of Canal and Branch.	3 <i>Chher-guzar.</i>	4 IRRIGATED AREA.				7 Divisional Canal Officer's <i>chher</i> rate per acre.	9 <i>Chheras due.</i>	10 REMARKS.
			Harvest.	Girāwari No. of holdings irrigated.	Area of each harvest.	Area of both harvests.			
			Rabbi	...					
			Kharif	...					
			Rabbi	...					
			Kharif	...					

APPENDIX III.

Statement showing lengths of existing flood-protective embankments, escape channels, and canal bunds, and the villages and canals liable for the repairs and maintenance of each, referred to in Rule 23.

1	2	3.
Name of work,	Length.	Canals or villages liable to supply <i>chhers</i> for maintenance and repairs.
<i>Flood-protective Embankments.</i>		
Sananwan ...	24 miles	Gharku and Magassan.
Shekhanwala ...	1½ "	Kot and Ishak branches of the Suk main branch of Magg.
Araln ...	4 "	Suk, branch of Suk main branch, Sirdar Khurd and Kala branches } Magg. of Dirga main branch.
Kinjhar and Mahra ...	8½ "	Pir and Raj branches of Ghuttu and Adil Canals.
Puran ...	1½ "	Furan.
Kot Ratta from north end to 1st or Murad-ghat or Gap ...	...	Villages on west bank of Surab.
Kot Ratta from Muradghat or Gap to Sulaman Canal ...	12,800 s. ft.	As this length does not at present protect canal irrigation, Deputy Commissioner has verbally consented to arrange for its maintenance temporarily by the people who benefit from the <i>said</i> permitted through the Gaps.
Langar Sarai ...	8,200 "	Ganesh, above Provincial road.
Khilluwala ...	1½ miles	Talari, above Provincial road.

Wafadarpur	...	...	3	"	miles.	...	The villages protected.
Khangarh Kothela	...	...	8	"	"	...	Ditto ditto.
Makhan Bela	...	...	7	(about)	miles	...	Ali-Khali Canal and a few other villages protected.
Escapes or drain, Rohillianwala, Section above Panjihar bridge	...	...	10	miles	"	...	The Chenab Canals.
Rohillianwala. Section below Panjihar bridge receiving drainage from Wali or Scinde Escape	...	...	10	"	"	...	The Chenab Canals and branches of the Ghutti, excluding the Sirdar and Ghili.
Scinde (or Wali extension). Section between Kalu and Sirdar Dinga	...	...	7	"	"	...	Dinga main branch of the Maggi and its branches.
Scinde (or Wali extension). Section between Sirdar Dinga and Panjihar bridge	...	...	9	"	"	...	Adil Canal, Pir and Raja branches of Ghutti.
<i>Bunds to maintain supply in certain Canals.</i>							
Bet Angra	...	...	...	...	...	...	Maintenance not at present necessary.
Lassuri	...	...	...	...	...	...	Dinga main branch of Maggi and its branches.
Chittah	...	...	...	...	...	...	Adil Canal.
Sirdar Ghutti	...	...	...	...	...	...	Sirdar branch of the Ghutti.

No. 231, dated Lahore, 11th November 1885.

From—H. C. FANSHAW, Esquire, Offg. Junior Secretary to Government, Punjab,
To—The Secretary to the Government of India, Revenue and Agricultural Dept.

I AM directed to forward, for the information of the Government of India, a copy of the Report on the recent Regular Settlement of the Muzaffargarh District, together with a copy of the orders of the Lieutenant-Governor thereon, and to solicit sanction to the confirmation of the Settlement for a period of twenty years.

From—C. J. LYALL, Esquire, C.I.E., Offg. Secy. to the Govt. of India, Revenue and
Agrl. Department,

To—The Secretary to Government, Punjab.

I AM directed to acknowledge the receipt of Mr. Fanshawe's letter No. 231, dated the 11th November last, giving cover to the report on the recent regular settlement of the Muzaffargarh District, and to the resolution recorded on the report by His Honor the Lieutenant-Governor.

2. The submission of this report, like that of those on the settlement of the Delhi, Jhelum and Jhang Districts, has been much delayed, and nearly five years have elapsed since it was originally submitted to the Settlement Commissioner. This period amounts to almost one-fifth of the term for which it is proposed that the assessment should continue in force. It is not, however, necessary to say anything further on the subject of the delay which has taken place, as this has been noticed in other communications, and

* No. 17, dated the 29th January 1886. the President in Council is glad to learn from a letter* recently received, that steps are now being taken to secure the early submission of the remaining settlement reports which are still before the Punjab Government or the Financial Commissioner.

3. The District of Muzaffargarh resembles that of Jhang in the fact that it is less liable to suffer from loss of crops than are more favored tracts in which the normal rainfall is sufficient to lead agriculturalists to dispense with irrigation. Over a large portion of the District, however, contributing no less than one-fourth of the total land-revenue, river floods cause the outturn to be irregular, and His Honor in Council observes with satisfaction the practical recognition of this fact which is afforded by the successful introduction of a scheme of fluctuating assessment.

In the remainder of the district the stability of the revenue administration depends, as pointed out by the Government of the Punjab, entirely on the proper working of its canals. The reforms which have been effected in this direction are very gratifying, and the success of the *chher* labor system goes far to prove the wisdom of the action taken in connection with the same class of labor in the adjoining district of Mooltan.

4. The results of the present assessment afford a subject for congratulation. No immediate increase of revenue has, it is true, taken place, but there is reason to believe that a firm foundation has been laid for the future prosperity of the District, and the expediency of adapting the system of revenue administration to local conditions has, it may fairly be hoped, been exemplified. For these results the Government of India is, no less than the Lieutenant-Governor, indebted to the Settlement Officer. Mr. O'Brien's earnest devotion to the interests of the district, his evident sympathy with the cultivating population, and the close study which he has given to their agriculture and to the conditions on which it depends, are the manifest cause of the success which has won Sir Charles Aitchison's approbation.

5. The President in Council confirms the settlement of the district for a period of twenty years.

Endorsement by the Punjab Government.

No. 62, dated Lahore, 9th March 1886.

COPY forwarded to the Senior Secretary to Financial Commissioner, Punjab, for information and guidance, with reference to his letter No. 687, dated the 1st of June 1883.

No. 63.

COPY forwarded to Mr. O'Brien for information.

No. 1.

FROM

EDWARD O'BRIEN, ESQUIRE,
Settlement Officer,

TO

MAJOR E. G. WACE,
Settlement Commissioner, Punjab.

Dated Muzaffargarh, the 7th April 1881.

SIR,

I have the honor to submit the final report of the first Regular Settlement of the Muzaffargarh District, with the following papers :—

1. Village Statements.
2. Annual Demand Statement.
3. The statement showing the tenures on which land is held.
4. General Abstract of area, resources, &c.
5. General Statement by village.
6. Abstract of area under crops.

Four maps accompany the report. The first shows the general features of the district, and the roads, canals, dhands and embankments, and all villages containing over 500 inhabitants. The second gives the divisions of the district under former Governments which were called *tálukas*. The third shows the assessment circles into which the district was divided at Settlement. The fourth gives the Government *rakhs* as finally demarcated.

Mír Nisár Alí was appointed Extra Assistant Settlement Officer in 1873. On 24th September 1875 he was promoted to be Judicial Assistant at Dera Gházi Khan, and Kazi Ghulám Murtazá was appointed to succeed him. Ghulám Murtazá is a resident of Ahmadpur in the Jhang District.

He married into a Muzaffargarh family. He has spent most of his service in the Muzaffargarh District. He has been Tahsildár and Náib-Tahsildár in Mooltan, and Extra Assistant Commissioner in the Montgomery District. He consequently has a very perfect knowledge of this part of the country, which rendered him very useful. His honesty was beyond question. He did his work thoroughly well, and the people had full confidence in him. I could not have wished for a better Assistant.

Munshí Bhagwán Dás was the best of the Superintendents. He had great power of organization and the gift of managing his subordinates so as to get the greatest amount possible of cheerful work out of them. He was hard-working, honest and intelligent. He was popular.

Sheikh Súbah came highly recommended from the Dera Gházi Khan Settlement. He had not Bhagwán Dás's power of management, and overworked himself rather than entrust details to his subordinates. The only fault I had to find with him was that he worked too hard. He was honest and active.

Pandit Narain Dás became Superintendent when Ghulám Murtazá was made Extra Assistant Settlement Officer. He worked well and honestly. He is a man of marked ability but inclined to be unpunctual. I believe he was thoroughly honest.

In Jugal Kishore the Settlement had a first-rate head clerk. He was promoted to the Commissioner's Office, Delhi, in 1878.

I have the honor to be,

Sir,

Your most obedient servant,

E. O'BRIEN,

Settlement Officer.

Muzaffargarh Settlement Report List of Errata.

- Page 1. In line 32 for "850 miles" read "850 square miles."
- Page 3. In line 31 for "capre" read "kapre."
- Page 11. In line 16 for "supply" read "supplies." In line 19 for "dependant" read "dependent."
- Page 15. In line 32 for "chiat" read "chita."
- Page 29. In line 8 for "calligonum" read "calligonum." In line 14 for "biminea" read "viminea."
- Page 33. In line 32 for "tribules" read "tribulus." In line 39 for "horida" read "horrida."
- Page 38. In line 39 for "florikin" read "florican."
- Page 41. In line 4 for "mahtan" read "mahtam."
- Page 42. In line 24 for "carinato" read "carinata."
- Page 43. In line 21 for "Langar Sarai Bukhi" read "Langar Sarai to Bukhi."
- Page 45. In line 3 for "kunjar" read "kinjar."
- Page 57. In line 13 for "Nawab Hasan Khan" read "Nawab Ghulam Hasan Khan."
- Page 80. In line 41 for "indargan" read "indarjan."
- Page 85. In line 6 for "bighas of til" read "bighas of til in Kharif."
- Page 91. In line 15 for "shall" read "should."
- Page 103. In line 21 for "previous" read "pervious."
- Page 108. In 2nd line from the bottom for "trac" read "rate."
- Page 110. In last column of statement in para. 24 omit "acres."

LAND REVENUE SETTLEMENT

OF THE

MUZAFFARGARH DISTRICT.

CHAPTER I.—PHYSICAL GEOGRAPHY.

1. The district of Muzaffargarh lies between the parallels of latitude $30^{\circ} 46' 30''$ and $29^{\circ} 1'$, and longitude $71^{\circ} 49' 15''$ and $70^{\circ} 33' 20''$. Its total area is 2,009,156 acres, and it contains a population of 295,547 souls, or 98.79 to the square mile. Of the total area, 462,109 acres, or 23 per cent., are cultivated and fallow; 953,870 acres are culturable waste; 281,725 are unculturable, and 311,554 are Government waste. This district forms the lower extremity of the Sind Sagar Doab, and is in shape a long narrow triangle, the eastern and western sides of which are formed by the rivers Chenab and Indus respectively, the apex being placed at the junction of those rivers. The base of the triangle forms the northern boundary of the district dividing it from Dera Ismail Khan and Jhang, and is about 55 miles long. The length of the triangle is 132 miles. The Indus is the western boundary of the district, dividing it from the Dera Ghazi Khan District. The Chenab is the eastern boundary dividing it from the Mooltan District and the Bahawalpur State. The northern part of the district consists of the valley of the Indus on the west, the valley of the Chenab on the east, and the sandy desert known as the Thal, in the centre. The valley of the Indus is broader than the valley of the Chenab. The main stream of the Indus has for years been receding to the west, and there is now a strip of good land 10 miles wide lying between the Indus and the Thal. This strip is irrigated near the bank of the river by the annual inundation, and inland by inundation-canals. The valley of the Chenab is deeper but not so broad, and does not seem subject to such great alterations as that of the Indus.

2. The two river valleys are separated by the sandy desert which occupies so large an area of the Sind Sagar Doab and is locally known as the Thal. The Thal, like the district, is triangular in shape with its apex to the south. The sides of the triangle are about 50 miles long, its base 34 and its area 850 miles. The western part of the Thal consists of a sandy soil with occasional sandhills. As we go east, the sandhills are more numerous, and higher. They run north and south in detached ridges, and are separated from one another by long strips and basins of stiff clay. These ridges rise higher and higher until they abruptly end at the edge of the Chenab valley. The Thal is at all times the grazing-ground of large numbers of camels, and, except during drought, of herds of sheep and goats. When rain falls, good grass springs up at once and large

herds of horned cattle come into the Thal for pasture. Water is everywhere, even in the wells locally called sweet, salt and bitter. Thal residents prefer their own bitter water, and complain of the sweet water of the other parts that it has no taste. The strips and basins of good clay that lie between the sandhills are cultivated with great care. On account of the surrounding sandhills the owner cannot extend his cultivation, and he makes the most of his little oasis. The soil is very highly manured and mixed with sand, locally called paná, from the neighbouring sandhills. To secure abundant manure besides the supply afforded by the owner's cattle, he hires flocks of goats and sheep to make his fields their night-quarters on payment of a small amount of grain. This payment is called "áhalí," and the rate is a quarter of a sér of wheat per score of sheep and goats for each night. The water courses are made perfectly straight and are V shaped instead of square, and carefully plastered with clay and straw to prevent leakage. The fields are laid out in small beds, a perfect rectangle in shape. Nothing can be neater or can show more careful farming than the lands of a Thal well. The irrigation is from wells helped by rain. Manure and rain are indispensable to ripen a crop. The owner of each well keeps a herd of sheep and goats. If rain does not fall there is no grass for the well-cattle or for the sheep and goats. The wells have to be stopped and the cattle are taken to the banks of the rivers, and there is consequently no manure. Thus, if there is no rain there is no manure, and consequently no crop. If the rainfall is abundant the wheat crop in the Thal is heavier than in any part of the district. Though the Thal is so inhospitable, and agricultural life in it so hard, yet the people thrive on it. Nowhere else are such fine strapping men and women, and such plump, healthy children, to be seen. The Thal is not a desert throughout its whole extent. In the west and south the tracts of good land are larger and the sandhills smaller. The inundation-canals find their way in, and with their help good crops of indigo and sugarcane are grown. The Thal does not form a dorsal ridge between the rivers. There is a regular slope from the Indus to the Chenab. The native legend about the formation of the Thal is, that formerly the Indus flowed down the centre of it and deposited the sand; then the Indus changed its course to the west and the wind blew the sand into the heaps we now see. There is no doubt that the Indus did flow down the Thal at one time. I have seen a deed of sale in which Basira, a village now in the centre of the Thal and equidistant from the Indus and the Chenab, is described as Bet Basira. At Shahgarh, which is the southern end of the Thal, a long lake which used to be the bed of the Indus is still extant.

3. The rest of the district is a dead flat and consists of strips of

The country outside the Thal.

alluvial land running parallel to the bank of each river which are irrigated by the annual inundation, and of a tract lying within the alluvial strips protected from the floods and irrigated by wells and canals. The alluvial lands are intersected by many side-channels of the rivers, here called dhands or pháts. The strips of alluvial land

grow wider as we proceed south, until the Indus strips meet the Chenab strips three or four miles south of the town of Alipur, and, from that point to the junction of the Indus and Chenab, the whole width of the district is subject to inundations and is dependent on them for its irrigation. In the cold season the district is of the size and shape shown in the map. In the hot weather the rivers rise and cover a long strip of land parallel with their banks. The strip so inundated by the Indus is much wider than that flooded by the Chenab. As the rivers become more swollen, they draw nearer to each other, until the Indus begins to force its way across the district at Jatoi, and flowing in a south-easterly direction, meets the rising waters of the Chenab near the village of Pakka Naich, three miles south of Alipur. This occurs about the end of June, and from this time till September the district, south of a line drawn from Jatoi to Pakka Naich, is more or less submerged. At first the water keeps to the depressions in the ground; but as the season advances the flood spreads over the whole country. Communication is effected by boats, and the town of Khairpur, a place of considerable mercantile activity, situated at an equal distance from the cold-weather streams of both rivers in the centre of the Doáb, becomes a port from which cargoes are shipped to Sindh. Attached to every house in this flooded part of the district are one or more small platforms raised on poles called *manhán* (Hindustani *machán*), on which people live when washed out of their houses. And a very hard life it is. From the end of June to the beginning of September the people are exposed to the hot sun by day, and to swarms of mosquitos at night. Sometimes they are unable to leave the *manháns* for days and weeks together. When the water subsides, comes the season called *Sahrá*, during which hardly any one escapes attacks of malarious fever. A proverb says that to go and live by the river side is to place a baby in a witch's lap, and another—

“ Vasandar bet Na tan capre Na roti pet.”	}	= Residence in the bet is to have no clothes for the body and no bread for the belly.
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There are, however, two sides to the question, for—

“ Daryá dá hamsáyá,
Na bhukhá na triháýá. ” =
The neighbour of the river
Is neither hungry nor thirsty.

4. Bounded by the Thal on the north, and on its other three sides by the alluvial lands above described, is a tract naturally and artificially protected from inundation and occupying the centre of the district. This contains many populous villages and a few fair-sized towns. Superior crops of sugarcane, indigo, rice and wheat are grown in it. It is irrigated by inundation-canals which run from April to September, and which are assisted by a large number of wells. Though this canal tract is in normal years protected by artificial embankments and natural elevations from the floods, yet the land lies very low, and destructive

inundations from both rivers, especially the Indus, do occur. During the seven years of this Settlement, this tract has been severely injured twice, once in 1874 by a flood from the Indus, and again in 1878 by floods from both the Indus and Chenab. This canal country is throughout its length scamed with long depressions in the level of the ground running from north-west to south-east, which at various times were beds of the river Indus. Indeed, there appears little doubt that at one time or another, the whole of what is now the Muzaffargarh District was river-bed; of these old river-channels the most clearly marked are the Shahgarh, and the Sindri, Saithal, Nangni, Garang, and Jannuwah dhands, and the old watercourse which is now used as the bed of the Puranwah canal. Well-defined old watercourses of this kind are called Garak Garang and Garangi. The dhands will be described farther on. The district thus consists of three great natural divisions—the Thal, the alluvial country, and the canal tract. For assessment purposes a more minuté division has been made, but the real natural divisions are those above given.

5. The district is divided into the following three tahsils:—

Administrative divisions.

Muzaffargarh.

Alipur.

Sananwan.

Muzaffargarh Tahsíl contains five police jurisdictions—

Rangpur.

Muzaffargarh.

Khargarh.

Kinjar.

Rohilánwáli.

Alipur contains four police jurisdictions—

Shahr Sultán.

Jatoi.

Alipur.

Sitpur.

Sananwan contains three police jurisdictions—

Daira Din Panah.

Kot Adu.

Sananwan.

6. The Indus forms the western boundary of the district throughout its whole length, a distance of 110 miles.

The Rivers.

The Indus.—The slope of the bank in this district is shelving and easy, the set of the stream being towards the western bank, which, in the Sangarh Tahsíl of Dera Gházi Khan, is high and steep. In the cold weather it is two miles wide. In

the hot weather it overflows its banks to such an extent that its width cannot be estimated. Its depth varies from 12 feet in the winter to about 24 feet in the summer. The current is strong and rapid. It has a great tendency to form islands and shoals which makes its navigation dangerous to boats. The most remarkable feature of the Indus is the gradual shifting of its stream to the west. The native legend of its having once flowed down the centre of the Thal has been mentioned. In the middle of the district are many villages now far away from the Indus to whose names are added the words Bet, Bela, Kacha, denoting that at one time they stood on or near the river-bank. The inland portion of the district is full of watercourses which were once beds of the Indus. In receding westward it has left various side-channels which are easy and safe means of irrigation. The numerous inundation-canals of the district have their heads in the side-channels, and are therefore comparatively safe from the erosion which is so destructive where canals take off direct from the main stream. We know from the *Ain Akbari* that the Indus joined the Chenab opposite Uchh, about 60 miles above the present confluence at Mithankot, and that nearly the whole of what is now the tahsíl of Alípur was then on the west bank of the Indus. General Cunningham's *Ancient Geography*, page 220, says that the junction "was still unchanged when Rennell wrote his geography of India in A.D. 1788, and still later in 1796 when visited by Wilford's surveyor, Mirzá Moghul Bég." But early in the present century the Indus gradually changed its course, and, leaving the old channel at 20 miles above Uchh, continued its course to the south-south-west, until it rejoined the old channel at Mithankot. Native tradition, however, says that the change of a course took place suddenly, and about the year 1787 A.D., at the point where the Indus used to turn east to meet the Chenab. One of the rulers of Sitpur dug a canal along the line of the present course of the river. The Indus suddenly deserted its old bed, and began to flow along the line of the new canal, and has flowed there ever since. This tradition is corroborated by the history of the time as to the date. The change of the course of the Indus left the country formerly on its west bank, exposed to the attacks of the Baháwalpur State, then rising into power. Accordingly we find that in 1791 A.D. the Nawáb of Baháwalpur seized the whole country which was transferred by the change of course from the west to the east bank of the Indus, and from 1791 to 1819 the Nawábs of Baháwalpur governed this tract as independent sovereigns. The old of the bed Indus is still clearly marked and is known as the Jannun nála. It has a course of about 24 miles from the village of Mela Cháchá which is in the north-west of the Alípur Tahsíl, to the village of Makhan Bela, opposite Uchh, where it joins the Chenab. There is also good evidence of the junction having once been at Shahr Sultán, 13 miles north of the junction mentioned in the *Ain Akbari*. The fickleness of the Indus has obtained for it the epithet of *kanjri*, or prostitute. The name of the Indus is "Sindh," which has three distinct meanings: (1) the river Indus, (2) the country on both banks of the river Indus and subject to its influence, and (3) the Province of Sindh.

7. The Chenab is the eastern boundary of the district along its

The Chenab.

whole length, a distance of 109 miles. The river is known here as the Chenab, but before it reaches this district it has received the waters of the Jhelum and Ravi, and is more correctly called the Trináb. After it has flowed three-fifths of the distance down the district, it receives the united Sutlej and Beas and becomes the Panjnand, though it is still known to us as the Chenab. After its junction with the Indus at Mithankot, the combined rivers become the Satnand, or seven rivers composed of the five rivers of the Punjab, plus the Indus and Cabul rivers. The bank of the Chenab is in parts high and steep, in others the slope is shelving and easy. The depth of the stream varies from 15 feet in winter to 30 in summer. The Chenab is narrower and less rapid than the Indus. The deep stream shifts very much, and the navigation is difficult but not so dangerous as the Indus. The Chenab does not betray a tendency to encroach on one bank more than the other. The inclination to "west," which all the Punjab rivers are supposed to have, is not apparent on the Chenab. During the last twenty years the gains and losses of Muzaffargarh and Mooltan have been equal. 17 villages with Rs. 2,667 revenue have been transferred by the river from Muzaffargarh to Mooltan, and 17 villages with a revenue of Rs. 2,491 have been transferred from Mooltan to Muzaffargarh. Eleven inundation-canals have their heads in the Chenab.

8. Looking up the Satnand with one's back to the sea, the Indus

Difference in the slope of the Indus and Chenab.

and Chenab part company at the southern end of this district opposite Mithankot. At this point the flood level is 308 feet above the sea. From here the slope of the Indus rises at the rate of 1·33 feet per mile, and the Chenab at 0·99 per mile. The Indus therefore gains 0·34 foot per mile on the Chenab, and at the north-west corner of the district, which is 110 miles above Mithankot, the Indus is 37 feet higher than the Chenab opposite at the north-east corner of the district.

There is no ridge between the two rivers, the spill-waters from the Indus are prevented from sweeping across the district partly by artificial embankments and partly by the sandhills of the Thal. The exposed state of the district is thus apparent.

9. The same description of boats ply on both rivers. They are

Features common to both rivers.

Boats.

of the kind called "beri," described at page 253 of Powell's Punjab Manufactures. They carry loads of 400 maunds in the cold weather, and as much as 600 to 700 maunds when the rivers are in flood. The boats afford a safe retreat to criminals or persons who are in difficulties at home. Such people go for a trip down to Sindh, or up to Kálabagh and Pind Dádan Khan, and safely elude the police or their relations until the storm has passed.

10. Both the Indus and Chenab carry silt in suspension in their

Alluvial deposit.
Kálá páni.

waters, and, during the floods, deposit it on the adjacent lands which it greatly fertilises. This alluvial deposit is known by several names,—

at, mat, ubá, niván and latár. The effect of a plentiful deposit is said to last five years, and as the supply is regular, farmers dispense with manure in the alluvial lands. The silt of the Chenab is said to be more fertilising and to contain less sand than that of the Indus. A local proverb thus compares the rivers—

"Daryá Sindh soná leve te kalai deve,
Daryá Chenáb kalai leve te sona deve." =
The river Indus takes away gold and leaves tin,
The river Chenab takes away tin and leaves gold.

Omitting destructive floods, there is only one condition under which inundation water does harm. When the flood has deposited its silt and flows on over salt land, the water becomes full of salt, and is highly injurious to vegetation. Flood-water in this state is called *kálá páni*. Under all other circumstances it is most beneficial. Besides depositing rich silt it carries away the surface salts, sweetens wells, and brings with it the seeds of trees and of valuable grasses. The annual inundations caused by the rising of the river are called *chhal* and *bor*. These words are used for the normal as well as the destructive floods—

"Je bor áwe tán bakht vadháwe,
Je na áwe tán kurá kháwe." =
If flood comes it increases our luck,
If it comes not, drought consumes us. (*Proverb.*)

Destructive floods will be described in connection with protective embankments. The rivers abound in fish, but few are caught in the main stream, except the *khagá*, a siluroid fish which takes a bait readily. The fishermen's apparatus is too weak and too small to be of much use in the large and rapid channels of the rivers. The great field for fishermen is in the side-channels, backwaters and tanks, here called *dhands*. The fish-eating crocodiles (*Gavialis Gangeticus*), here called *sinsár*, are common in both rivers. The snub-nosed crocodile; *Crocodilus palustris*) is common, but it shows itself less and prefers the still water of the *dhands*. Tortoises are found both in the rivers and in the *dhands*. The porpoise (*Platystrota Gangetica*), here called *bulhin*, is often seen in the main stream of the rivers; otters are common and are said to be taught by fishermen to bring them fish. I have seen tame otters fishing, but they ate the fish directly it was caught. Otters are supposed to be the incarnation of greediness, and a proverb says—"Only a fool would go to the otter's home to get the remains of yesterday's dinner."

11. The rivers and the facts incidental to them are the remarkable feature of this district, and touch the administration at more points than any other natural phenomenon. They irrigate by their regular inundation 120,000 acres, and by canals depending on them 200,000 acres of cultivation. These 320,000 acres have to be measured up and 120,000 acres assessed with land-revenue every year, so that it is a matter of deep interest, both to a population almost wholly agricultural and to government which derives its revenue here literally

from the water, that the rivers should rise at the usual time, that the supply of water should be abundant but not excessive, and that the rivers should fall at the right time. When the supply is scanty, the keenest competition for the water begins. On the canals the best friends fall out. In the sailāba country the water flowing in the drainage-channels is dammed up and forced into the cultivated lands, and some very pretty fights are the result. If the water does not retire at the proper time, the land cannot be ploughed for the rabi crop. Even when the rivers are on their best behaviour, they deprive a fourth of the population during four months of the means of following their only pursuit, agriculture, and drive them from mere *annui* to transfer cattle from bank to bank, and provide so easy a medium for transporting the stolen animals that a naked urchin can drive a herd of fifty buffaloes across the combined five rivers. Eight zaildārs in the flooded part of the country are on heavy security for indulging in this pastime, and it is no use to dismiss them, because the whole population is similarly inclined. But the rivers do not always behave well: they burst bands, carry away houses and stacks of corn, breach roads, blow up bridges, fill canals with mud, throw down Government buildings, and even drown the semi-aquatic cattle. In the flood of 1874, 500 head of cattle were drowned in the Sananwan Tahsil alone. Thrice in the last seven years all work has been suspended for days in the Government offices. The police, the kutcherry munshis, the prisoners in the jail, and the settlement asāmis have been sent in a body to make embankments, to divert floods from the town and station of Muzaffargarh. In the flood of 1874 the house of the salt patrol at Kuraishi was washed away, and he spent a happy day in August on the top of a sandhill waiting for the water to subside. Thus it will be seen that the rivers alone find the Government officials of the Muzaffargarh District in ample work.

12. The side-channels of the rivers, the inlets from the rivers, and the tanks or lakes are called dhands. The side-channels are also termed phāts. The dhands are of two kinds. The first are isolated dhands in which communication with the rivers only occurs during the inundation season, and dries up before the next year's floods come. The second are connected dhands, being expansions of a river, small stream or canal, into a tank, and which throughout or for the most part of the year are connected with the rivers. The dhands supply a good deal of irrigation by means of Persian-wheels, either single (jhalār) or double (beghar), one wheel being placed above the other. The dhands abound in fish, and great quantities are caught in them. The isolated dhands are the best for fishing, because weeds spring up rapidly in them and afford a refuge as well as food for the fish. Besides fish, an account of which will be given hereafter, the products of the dhands are as follows:—

Water-lilies (*Nelumbium speciosum*). The local name is pabban. The flowers are used for medicine and considered cooling. The seed

capsules hold 20 or 22 seeds embedded in cellular pith, of the size and taste of a filbert. While young, the seeds are eaten raw or cooked as a vegetable. The flesh of the seed is called gar, it is white, covered with a green seedcoat. The seeds are considered a cure for vomiting, and, mixed with sugar, are good for diseases of children. The roots of the pabban spread in the mud at the bottom of the dhand. They are long and white and divided into lengths by knots. They are dug up and eaten, either roasted with salt or boiled as a vegetable. Pabban roots are called bhe, a corruption of the Persian bekh or root. Singhâras (*Trapa bicornis*) are sometimes found in the dhands. The nuts are dried and, when required for use, the kernels are separated from the husks by pounding and made into flour. Kúndr bulrush (*Typha angustifolia*) is found in most of the dhands, especially in the south of the district. The flags are called phará and are used for making matting called parchá and phure and string for beds. A charpoý of bulrush string is highly esteemed for its softness and coolness, and to sleep naked on such a bed is considered a great luxury. The down of the ripe ear is collected and boiled in a cloth like a plumpudding. It has a sweetish insipid taste. The down is called búr, and down pudding is búri. At the lower part of the ear a fibrous substance something like cotton is produced which is called kahú. This is used as tinder, and is much sought after by the frontier Biloches. The dhands swarm with wildfowl in the winter; a good many snipe are also seen, and occasionally a bittern. Very large bags of wildfowl have been made by sportsmen in the dhands. The dhands are very numerous and vary much in size and depth, according as the floods fill them or not. The following are the most permanent and the best for shooting:—

1. Kaudíwál *alias* Buparái dhand in the village of Kaudíwál, three miles north of Rangpur. Wild duck, goose and snipe abundant. Good fishing.
2. Ghazanfargarh dhand in the village of Ghazanfargarh, 15 miles south of Muzaffargarh. This is a permanent lake of about 50 acres. Wildfowl abound. There is a great fishery here. It is well worth a visit to see the take of fish divided in the evening. The lake is full of water-lilies.
3. The Sindhri dhand in the villages of Jálwálá, Muham-madpúr, Chitwáhan, Isan-wálá and Sandílá. It crosses the Alípur road between the 17th and 18th milestone from Muzaffargarh. It is full of wildfowl, and bitterns are often seen. It abounds in pabbans.
4. Saithal dhand in the village of Bastí Jalál. It crosses the Alípur road between the 20th and 21st milestone from Muzaffargarh; wildfowl are very plentiful.
5. Panjihar dhand near Rohillanwali, 23 miles south of Muzaffargarh, the country becomes so low, that the water of the Indus and the Chenab finds its way into the centre of

the Doab, and a perfect network of dhands occur, all of which discharge their waters into the Panjihar dhand, which crosses the Alipur road between the 24th and 25th milestone from Muzaffargarh. The Panjihar is so called because it receives the surplus water of the following 5 canals :—

The Sardárwah ; the Nángwah ; the Adilwah from the Indus ; and the Hájiwah and Ghazanfarwah from the Chenab. The country here is in great want of drainage, and an attempt is being made by the Canal Department to utilise the Sindhri, Saithal and Panjihar dhands to drain the flood-water into the Chenab. This, if successful, will be a great boon to the country. The Panjihar, on its way to the Chenab throws out a branch called the Nángná or snake dhand from its tortuous course. Both the Nángná and Panjihar abound in wildfowl and fish.

6. The Shahgarh dhand or garak. This is an old bed of the Indus. It begins in the village of Ayab Aráin near Kuraishí, and runs in a winding course among the sand-hills of the Thal, till it ends near the old fort of Sháhgarh, 10 miles from Muzaffargarh on the Kínjar road. This dhand is 6 miles long. The greatest width is 54 yards and greatest depth 8 feet. It abounds in fish and wildfowl. The common snipe is tolerably plentiful, and it is one of the few places in the district where the painted snipe is found. It is full of pabbans and kundra.
7. Jannúwáh dhand is about 24 miles long. The northern end is in the village of Mela Cháchá. It runs in a southeasterly direction and joins the Chenab near Makhanbela. It abounds in fish, wildfowl and snipe. Bitterns are often seen. Kundra and pabban are plentiful.
8. The Garang dhand is in the south of the Alipur Tahsíl, its northern end is in the village of Bhamrí and its southern end in Dháká. Its cold weather length is about 9 miles. Its greatest width is 60 yards, and greatest depth 12 feet. This is a real paradise for sportsmen. The water swarms with wildfowl and the banks with black partridge. Fish are abundant. Snubnosed crocodiles are constantly seen, and tortoises reaching two feet in diameter. Snipe are fairly plenty, and bitterns are occasionally seen. There is a branch of the Garang called the Alí Shah dhand, which runs through the village of Muhib Shah ; that also abounds in wildfowl.

The Bilewálá dhand in the village of Bilewálá becomes a large lake when the rivers rise well. It is remarkable for the great variety of fish found in it. Wildfowl and pabbans are abundant. The dhands mentioned are fairly permanent and are situated inland. There are

many other permanent dhands inland. The right to fish and gather pabbans is leased every year. Some dhands are leased singly, others in clusters. Along the banks of the rivers the dhands are innumerable and vary much in size and position. New ones are constantly forming and old ones are filled up. The river side dhands are leased in lengths of the river bank. The dhands on the bank of the Chenab in the Muzaffargarh Tahsíl are leased in three lengths—

1. Maksúdpúr adjoining Jhang to Murádábád, which is opposite Mooltan.
2. From Murádábád to Sulemánpur, which is opposite Shujábád.
3. From Káoni to Jhandewáí on the boundary of the Alipur Tahsíl.

The dhands on the bank of the Indus in the Muzaffargarh Tahsíl throughout its whole length are leased together. The river side dhands in Sanáwan and Alipur are not leased.

13. As already stated, the annual inundation supply natural irrigation to about 150,000 acres. The rainfall is so small that no crop can be grown dependant on rain alone. The means of artificial irrigation are wells and canals. Wells are of two kinds. Those lined with masonry (pakká khú) and those lined with either logs or wattles, which are called kharorás, a well lined with logs is called "ghat dá kharorá," a well lined with wattles is called "lei dá kharorá," because the wattles are made from the lei bush ("*Tamarix dioica*"). No wells are unlined with either masonry, timber or wattles. The soil is so fine that unlined wells cannot be made. The wells are all worked by Persian wheel. Persian wheels (jhalár) are also erected on the banks of canals, rivers and tanks. There were 11,802 wells in the district in 1874-75 of the following depths to the surface of water —

11,420 wells under 20 feet.

355 wells from 20 feet to 30 feet.

27 wells from 30 feet to 40 feet.

No wells are deeper than 40 feet. The depth is very uniform, varying only from 9 to 12 feet in the greater part of the district. The depth is least in the south of the district and on the banks of the rivers. In the Thal the depth is greatest, and averages 24 feet. A well lined with masonry costs from Rs. 225 to Rs. 381, a well lined with timber Rs. 125, a well lined with wattles Rs. 35 to Rs. 90, and a jhalár lined with masonry Rs. 50. As a rule, four pairs of bullocks costing Rs. 80 a pair are used per well. The gear of a Persian wheel costs Rs. 40. In this district a well unassisted by other sources of irrigation irrigates 17 acres, a well assisted by sailáb, 21 acres, and a well assisted by canal, 23 acres. If the cultivator be intelligent and hard working, or if the shareholders are united, a much larger area can be irrigated.

"Akí bájhon khú kháll" = Without wisdom the well is empty. (*Proverb*.)

There are only 24,632 acres of unassisted well irrigation in the district. This area is equal to 6 per cent. of the total cultivation. It is a common amusement to race bullocks at wells. A pair of bullocks are yoked to the wheel and driven round as fast as possible for about half an hour, then another pair, and so on till the competitors have all had a turn. The bystanders then decide which pair is the winner. The owner of the winning pair receives no reward, but is expected to give food or sweetmeats to the company. The competition interests the Jats intensely. The ordinary spectator can conceive nothing duller. The only remarkable thing is the excitement of the Jats and how they manage to raise it. The favourite day for bullock racing is the first of Visákh (April-May); hence a bullock race is called Visákh at whatever time of the year it may occur.

14. About 200,000 acres of cultivation are irrigated by inundation canals. These in good years flow from the 15th of April to 15th September, occasionally a fortunate set of the river or greater activity than usual in clearing enables a canal to flow all the year round.

The canals are 53 in number, of which 11 have their heads in the Chenab and 42 are fed by the Indus. Their total length is 699 miles. This mileage does not include the side channels of the Indus in which the canals have their heads, and which themselves supply a good deal of lift irrigation.

The area irrigated has been measured four times hitherto with the following result:—

	Acres.
At Regular Settlement in 1873-75 ...	203,666
By canal measurements in 1877 ...	205,000
" " in 1878 ...	210,206
" " in 1879 ...	186,051

The areas irrigated by the Chenab and Indus Canals, respectively, at the Regular Settlement survey were as follows:—

Chenab canals ...	37,115
Indus canals ...	166,551

The land-revenue depending on the canals according to the Regular Settlement is—

	Rs.
Chenab canals ...	69,435
Indus canals ...	229,640

Total of district ... 2,99,075

15. Before describing each canal, attention is invited to the accompanying map. Before what is now the History and description of the canal. Muzaffargarh District was united under Sáwan Mal, the Sikh Governor of Mooltan, it was divided

between four governors in whose time most of the canals were made. The present Sanawan Tahsíl was governed by Nawáb Muhammad Khán, Sadozái of Mankerá, here known as Nawáb of the Thal. The country lying opposite Derá Gházi Khán and containing the Talúkas of Aráin, Kinjar, Serí, Trund and Mahrá was subordinate to the Nawábs Gházi Khán, Nawáb Mahmúd Gújar and the Kalthorá governors of Dera Gházi Khán and after the Sikh conquest, passed into the possession of the Nawábs of Baháwai Khán. The country lying opposite Mooltán and containing the Talúkas of Rangpúr, Murádábád, Muzaffargarh, Khángarh and Ghazanfargarh was under Nawáb Muzaffar Khán, the Pathán Governor of Mooltán. The Alípúr Tahsíl and the Talúká Khorán of Muzaffargarh Tahsíl were ruled by the Nawábs of Baháwalpur. Though these rulers were not quite synchronous, they may be treated as such in order to classify the bewildering list of names connected with the founding of the canals. The Muzaffargarh District was united under Sáwan Mal in 1833 A.D., but he had held the country round Muzaffargarh in farm from Ranjit Singh, since 1822 A.D. A minute history has been prepared of each canal in the vernacular canal record which has been made at the Regular Settlement and which will be found useful in deciding canal disputes: a short account of the most important canals may be given here.

16. The 11 Chenab canals differ from the Indus canals in having their heads independent of one another. On the Indus, a number of canals have their heads in a phát or side-channel and can be described together.

1. The Karamwah canal has its head in the village of Maksúd-púr at the north-east corner of the district. Its length is 22 miles. It irrigates 997 acres, paying a revenue of Rs. 1,472. It was a natural branch of the Chenab which was improved by Karam Narain, son of Sáwan Mal, when the former was Governor of Rangpúr. He spent Rs. 5,000 on the work and repaid himself by levying a rupee on each well, till the whole sum was recovered.
2. The Ganeshwah, after many changes of head takes off from the Chenab at Langar Sarai. Its length is 28 miles and irrigates 5,806 acres, paying a revenue of Rs. 10,487. The Ganeshwah was dug in the time of Nawáb Muzaffar Khán by the villages which it was to irrigate. It was then called the Ghouswah. In the time of Sáwan Mal its name was changed to Gancshwah which it still keeps. In 1879, a new branch called the Waliwah was added to the Ganeshwah. It leaves the main canal at the village of Khánpur and runs parallel with it for twelve miles. It irrigates the country west of the Ganeshwah.
3. The Toláwah has a length of six miles. It irrigates 1,025 acres, paying a revenue of Rs. 1,777. It was dug by

the villages of Doábá, Talíri, Lálpúr, Hajipur and Chak Chajrá, in the time of Mulráj, Governor of Mooltán, under the supervision of Raizáda Tola Rám, Kárdár of Muzaffargarh.

4. The Talíri is the largest canal in the Muzaffargarh Tahsíl.

The Talíri Canal.

The main line is 12 miles long.

It has the following branches:

Hájíwah	... 13 miles.
Khánwah	... 6 "
Pírwah	... 4 "
Nángníwah	... 5 "
Khokharwah	... 3 "
Núrwah	... 4 "

The whole length of the Talíri and its branches is 47 miles. It irrigates 14,004 acres of the richest land in district, paying Rs. 32,829. The Talíri was originally a side channel of the Chenab. Its name then was "Trailare" or "Three branches" now corrupted to Talíri. In the time of Sáwan Mal it was improved and made into a canal and connected with its branches, all of which are older than the main line, having been dug in Nawáb Muzaffar Khan's time. The course of the Talíri had lately become very tortuous, and in 1875-76 the irrigators agreed to supply 30,000 laborers to straighten it. They were assisted by a money grant of Rs. 4,000. Loops were taken out of it, which reduced the length of the main line from 16 to 12 miles.

5. The Gajjúwah is 5 miles long. It irrigates 826 acres, paying Rs. 1,505 revenue. This canal

The Gajjú Canal.

is not under Government supervision, but is managed by Allah Dád Khán, the Honorary Magistrate of Khángarh, whose ancestors, with other proprietors, excavated the canal. He owns lands in the village of Gajjúwáhan. Hence the name of the canal.

6. The Jhangáwarwáh has a length of 17 miles, including its branches. It irrigates 7,795

The Jhangáwar and Ghazanfar Canals.

acres, paying a revenue of Rs. 13,359. It was dug during the

Baháwalpur rule by the villages which irrigate from it. For the last ten years this and the Ghazanfar canal have had one head. In 1880 separate heads have been made. The heads of both canals are in the village of Kuthela. The irrigators on the tail of the Jhangáwarwah have had great fights with the Kuthela people. The canal is said to have been named from jang, a fight. Besides the Ghazanfarwah, which has hitherto been considered a branch of the Jhangáwar, there is another branch called the Muhammadpuri.

7. The Alíwah canal has a length of 4 miles. It irrigates 1,139 acres paying Rs. 1,378 land-revenue. It was dug in the time of Sáwan Mal by the villages which irrigate from it. It was named after one Alí who managed the excavation.

8. The Khaliwah has a length of 13 miles. It irrigates 5,018 acres, paying a revenue of Rs. 5,971. It was dug in the time of the Baháwalpur Government by the villages which irrigate from it.

Besides the canals above mentioned, there are two small canals, The Langarwah and Jhalárinwah, but they are now much neglected. All the Chenab canals above mentioned are in the Muzaffargarh Tahsíl. The Jhandúwah branch of the Khaliwah irrigates part of the villages of Kalarwáli and Rukanwáli in the Alipur Tahsíl.

There is a canal now disused, called the Nángwah, which used to have its head in the village of Makhan Belá, opposite Alipur, which might easily be restored.

17. The marked difference between the Chenab and Indus canals is, that the former mostly have their heads in the main stream of the river, while the latter take off from side-channels, and their heads are therefore protected from erosion. The side-channels known as the Chitá meaning " Mad " leaves the river a little south of Mári in the Bannu District, where the Indus emerges from the Salt Range, and is nearly continuous to about the middle of the Muzaffargarh District at a point a little south of the town of Kinjar. The banks of the Chitá are low, and though fairly permanent, it is apt to change its course. West of the Chitá, between it and the high bank, fed by the Chiát, and running for the most part parallel with it, are other natural channels of a more permanent character. Beginning from the north these are in succession :—The Garku, Magassan, Maggi, Súk and Dingá. South of Kinjar, the Chitá disappears, and for the rest of the length of the Indus in this district, the feature of a double set of side-channels is lost. The remaining canals below the Chitá take off either from the Indus or from small side-channels, within a short distance of it. It is a question whether any real efficiency of the Indus canals can be secured which does not embrace the study and improvement of the side-channels of the Indus.

Beginning at the north-west corner of the district where the Indus enters it, the first canal we come to is the Gulzári Canal. Gulzári which irrigates the village of Ahsanpúr. This canal has been much neglected. Its head is in the Chitá, but it only works when that channel is in the high flood. It is not regularly cleared.

South of Gujrat comes a group of four canals. The Hinjrái, Dín Muhammad, Khán Chand and Nángní. This group is called the Garkú series in canal official language, because the canals have their heads in the Garkú nála which is fed by the Chitá. In Settlement records the group is called the Matka series after Mián Matka, a Kúrdár of Dairá Dín Panah under the Sikhs, who excavated or improved every canal in the group. The Hinjrái and Dín Muhammad have a common head in the Garkú. The Khán Chand and Nángní have also a common head. The Khán Chand, according to tradition, was once much longer, and used to irrigate as far south as Gujrat, which is 28 miles south of the present tail of the Khán Chand. The Nángní is named from Náng, a snake, in consequence of its tortuous course. The Garku or Matka series irrigates 9,175 acres near the town of Dairá Dín Panah, paying a revenue of Rs. 13,239.

The Magassan channel has its head in the Chitá, and feeds the 16 canals mentioned in the margin. The main line of the Magassan is 12 miles long. The canals which it feeds irrigate 30,393 acres, paying a revenue of Rs. 40,164. The country, from 3 miles north of Kot Adu to 5 miles south of Sanáwan, is irrigated by this series, and its branches reach far into the Thal. The careful clearance of the Magassan is of the most vital importance. In 1879 the clearance was neglected, and the area irrigated fell to 14,000 acres,—a falling off of 18,000 acres. The main canals of this series are as follow:—

The Magassan series; Fazalwáh, Choudhríwáh, Ganda Bhubbar, Ganda Parihar, Rajjwáh, Karia Choudhri, Sardarwáh, Nángní Khurd, Nángní Kulán, Ján Mohammad, Pírwhá, Hamzawáh, Dogari, Chákar Khán, Trund, Chuán.

The Fazalwáh, which was excavated under the supervision of Fazal Hossain, Tahsildár, in 1862 A. D. It irrigates 1,074 acres, paying Rs. 1,404 in the neighbourhood of Kot Adú. The Choudhríwáh was excavated 90 years ago by Choudhri Pairá Rám, grandfather of Kírpa Rám, the present Choudhri and Zaildár of Kot Adú. It irrigates 3,242 acres, paying Rs. 4,382. The Sardárwáh was excavated in the time of Nawáb Muhammad Khán of Mankera. It has four branches—

The Múhammadpurí.

The Khánpurí.

The Kariá Gáman.

The Kariá Sanánwán.

It irrigates 7,831 acres, paying Rs. 10,181 revenue. It is capable of great extension into the Thal. The Chákar Khan was originally excavated by a colony of Gurmání Biloches in the time of Nawáb Muhammad Khán, and after many changes of channel and name fell into the course made for it by Chákar Khan, a lawless chief of the Gurmánís, who was alive at the beginning of British rule, and about whom Mr. Simson, Settlement Officer, in 1854 A. D., writes in very uncomplimentary terms. The Chákar Khan irrigates 4,068 acres, paying Rs. 5,185 revenue. The last canal of the Magassan series is the Chuán, which

means a coruscation, a meteor. Unfortunately for its name it is one of the slowest-running canals in the district. It was excavated in the time of Nawáb Muhammad Khan, under the supervision of Hamíd, Kárdár. It irrigates 3,358 acres, paying Rs. 5,065 revenue.

South of the Magassan is the Maggí channel, which is fed direct from the Indus. One canal, the Khudádád, has its head in the Maggí. It irrigates the Thal country about Mahmúd Kot. It was excavated under Hamíd, the Kárdár before mentioned. It is 13 miles long, and irrigates 3,395 acres paying Rs. 5,065 revenue. It was renovated in the time of Mír Muhammad, a noted Tahsildár of Kot Adu, who named it the Khudádád. After sending out the Khudádád, the Maggí divides into two branches—the eastern branch is called the Súk, “dry,” and the western the Dinga or “crooked”—each of which feeds a group of canals.

The Súk series comprises the Kotwáh, the Háji Ishákwáh, the Jhákhriwáh, the Sánhwáh, the Thalwáh, and the Sardárwáh Khurd.

The Kotwáh was dug in British rule by the villages which irrigate from it. It is 8 miles long, and irrigates 3,025 acres paying a revenue of Rs. 3,815. It irrigates the country round Mahmud Kot, whence it derives its name.

The Háji Ishákwáh was excavated in the spring of 1878, and irrigates the country round Gujrát and Málmúd Kot. The villages that benefit by it subscribed Rs. 1,500, and Government contributed Rs. 500. It irrigates 2,359 acres paying Rs. 2,809 revenue. It is 5 miles long. It is named after a robber-saint whose shrine is in the village of Gujrát. At this point the canals which owe their origin to Nawáb Muhammad Khan of the Thal begin to end, and we enter the country ruled successively by the Mirhání, Gujar and Kalhora governors of Dera Gházi Khan, and which, after the Sikh conquest in 1830, was farmed by the Nawáb of Baháwalpur. At the same point we leave the Sanánwán Tahsíl and enter the Muzaffargarh Tahsíl. The heads of the next four canals are in Sanánwán, but they irrigate mostly in the Muzaffargarh Tahsíl.

The Jhákhriwáh was excavated first in the time of the Nawábs of Baháwalpur. It was afterwards improved and extended by Malik Gámún Jhákhar, a famous zamíndár who owned land in various parts of the district, and whose descendants still live in Kotlá Gámún, in the Alípur Tahsíl. In its best days it reached to Daira Vadhú, 12 miles further than its present tail, which is in the village of Sabzajat. It is 15 miles long, and irrigates 7,002 acres paying Rs. 9,518 revenue. Its operations extend through the Thal of the Muzaffargarh Tahsíl, and magnificent crops of indigo are grown on it. The Jhákhriwáh is named after the tribe to which its improver, Malik Gámún, belonged.

The Thalwáh is the last of the canals dug in the governorship of

The Thalwáh.

Muhammad Khan, the Nawáb of the Thal. Its length is 10 miles; it irrigates 4 villages of the Sanánwán Tahsíl and 24 villages of the Muzaffargarh Tahsíl. The area watered by it is 5,254 acres paying Rs. 7,589 revenue. Its influence lies entirely in the Thal, and, like the Jhákhríwáh, fine crops of indigo are grown on it. The Sánwáh was dug in the time of one of the Gházi Khans. It irrigates 1,836 acres paying Rs. 2,799 revenue. Its length is 7 miles. At one time it refused to run, and the irrigators consulted a Thal saint, Muhil Jahániá, who told them that a buffalo-bull (Sánh) would come out of the Súk, and that they were to follow it and dig a new canal along the course which the bull took. Hence its name the Sánwáh.

The Súk at its southern end narrows into a very small channel,

The Sardárwáh Khúrd.

which is treated as an artificial canal and kept cleared. It irrigates 854 acres paying Rs. 1,179 revenue. The name of this channel is the Sardárwáh Khúrd.

The western branch of the Maggí is the Dinga, or "the crooked,"

The Dinga series.

which feeds the following canals:—

The Kálúwáh.

The Sardárwáh Kalán.

The Sardárwáh Khúrd.

The Nángni or Nángwáh.

They irrigate the apex of the Thal and the country about Kínjar.

The Sardárwáh Khúrd.

The Sardárwáh Khúrd was excavated seventy years ago, under the government of Baháwalpur. It irrigates 725 acres paying Rs. 1,169 revenue.

The Kálúwáh was excavated in 1839 A.D. by Diwán Sáwan Mal.

The Kálúwáh.

At that time there was a great famine (kál), said to have been caused by the advance of the British army with Sháh Shuja to Kandahár, and the canal was named after kál, the famine. The Kálúwáh passes through the country at a high level, and is a first-rate irrigator. The Sháhgarh Dhand is used as an escape for its surplus water. The Kálúwáh irrigates 3,322 acres paying Rs. 4,799 revenue. Its length is 8 miles.

The Sardárwáh was excavated two hundred years ago by one of the

The Sardárwáh Kalán.

Gházi Khans, and improved about fifty years ago by Diwán Sáwan Mal. Its length is 16 miles. It irrigates 14,781 acres paying Rs. 25,499 revenue. This canal wants an escape badly for its surplus water, which does great damage at and about the village of Pakká Ghalwán. The road from Khángarh to Kínjar is sometimes rendered impassable by the floods from this canal.

The Nángwáh was dug by the villages near Kínjar; the date of

The Nángwáh or Nángni.

its excavation is not certain. Its length is 14 miles. It irrigates 1,993 acres paying Rs. 7,573 revenue.

The Chitá series.

The next group of canals have their heads in the Chitá channel. They are as follows :—

Adilwáh.

Bihishtiawáh.

Pírwáh.

Sardárwáh.

Rájwáh.

Ghílúwáh.

Rerhúwáh.

The Chitá is here called also the Guthú, and, where it passes through the village of Dárin, the Dárinwála Dhand.

The Adilwáh was dug by the villages which irrigate from it under the supervision of one Adil, an agent of the

The Adilwáh.

Baháwalpur government. It is 12 miles long,

and irrigates 10,546 acres paying Rs. 15,870 revenue. It is a first-rate irrigator, and often continues to run through the cold season.

The Pírwáh was originally dug, twenty years ago, by a combination of three villages, Rohillánwáli, Bhundewáli and

The Pírwáh.

Ponta Malána, which are said to have spent

Rs. 15,000 on it. Afterwards other villages obtained water from it. On this canal occurred the only case known in the district of selling irrigation rights. Ali and others, of Ponta Malána, sold two-eighths of their right in the water to the village of Rohillánwáli for Rs. 200. The village of Rohillánwáli has been treated rather badly this year (1880). An escape has been dug to carry off the surplus water of the Talíri canal system. This escape passes through the western part of Rohillánwáli and cuts through the Pírwáh, preventing water from reaching the village. The Pírwáh is 13 miles long, and irrigates 2,322 acres paying Rs. 3,125 revenue. A masonry aqueduct should be made to carry the Pírwáh across the Rohillánwáli escape.

The Rájwáh was dug in the time of the Baháwalpur government,

The Rájwáh.

and irrigates the country in the neighbourhood of the large village of Mahrá. The canal is

named from Ráj, a local word meaning people, subjects, showing that the canal was dug without assistance from the government. The Rájwáh is 9 miles long, and irrigates 3,671 acres paying Rs. 5,710 revenue.

The Rerhúwáh was dug during the government of Baháwalpur by the following nine villages :—Metlá, Bastí

The Rerhúwáh.

Jhangar, Hasanpúr, Kachá, Gindi, Khákhi,

Kushak, Alúdewáli, Thakránwála and Mohriwála, which are said to have spent Rs. 7,000 on it. Its name means "the roller," from rerhan, "to cause to roll." It is 12 miles long, and irrigates 4,315 acres paying Rs. 6,277 revenue.

The Bihishtiawáh was first dug in the time of the Gházi Khans.

The Bihishtiawáh.

After running for forty years it became unserviceable. In 1861 the irrigating villages

subscribed some money, and, having got Rs. 5,000 takávi from Government, renovated the canal and dug a new head to it. The Bihishti crosses the country at a high level, and is a first-rate irrigator. It waters 5,047 acres paying Rs. 5,087 revenue. With the Bihishti we enter the Alípur Tahsil.

The Sardárwáh was dug by a combination of villages under the government of Baháwalpur. It waters a few villages of the Muzaffargarh Tahsíl and the country about Shahr Sultán. It runs at a high level, and first-rate crops of sugarcane, indigo and rice are grown on it. It is almost too good an irrigator, for it occasionally floods the country. It badly wants a regulator near its head and regulators at the heads of its branches. It irrigates 9,073 acres paying Rs. 9,676 revenue. Its length is 17 miles.

The Ghilúwáh is 7 miles long, and irrigates the south-western corner of the Muzaffargarh Tahsíl. It irrigates 2,453 acres paying Rs. 3,083 jama. From this point to the extremity of the district the canals do not group themselves round side-channels of the Indus, but have their heads singly in the river or branches of it.

The Puránwáh is an old channel of the Indus, which about one hundred and fifty years ago dried up and received the name of Purán, "the old." About this time the Nawáb of Baháwalpur levied one labourer per well from the villages which would benefit, cleared out the old channel, and made it into a canal. In 1840 A.D. the canal had become unserviceable. In 1844 Diwán Múlráj, Governor of Mooltan, contributed Rs. 4,000, and levied Rs. 12,000 from the irrigating villages, and again excavated the canal. Up to 1876 it was neglected. In that year the irrigators supplied an additional number of labourers, and Government contributed Rs. 4,000, and the canal was again cleared and made into a very fine work. The Purán has 38 large branches besides small distributaries. It irrigates 34,010 acres paying Rs. 40,130 revenue. Its length, including branches, is 105 miles; excluding branches, the length of the parent canal is 29 miles. The chief branches of the Puránwáh are—

The Bakhíwáh.
 The Kapre Khas (clothes snatcher).
 The Nimánáwáh.
 The Kutabwáh.
 The Pírwáh.
 The Khánwáh.
 The Baháwalwáh.
 The Kádirwáh.

Every government that ruled this country has had a hand in the Suhrábwáh. The Nawáb of Gházi Khan dug it. He was followed by the Baháwalpur ruler, who levied one pai* per path† of grain as water-rate for having improved it. In the time of Sáwan Mal, a new head was dug. Two new heads were dug during British rule. The Suhráb has two large branches, the Mughalwáh and Ratanwáh. The latter was renovated in 1879. The Suhráb irrigates 5,203 acres of very good land, paying Rs. 8,191 revenue, in the neighbourhood of Jatoí.

* A pai is equal to 16 sérs. † A path is equal to about 32 maunds.

The Chhaliwáh was originally an independent canal, having its head in the Sohni Dhand, which flows between Jatoí and the Indus. It was dug by Kází Ghulam Murtaza, when Tahsildár of Alipur. The Suhráb now tails into it, and it is really part of the Suhrábwáh. The Chhaliwáh irrigates 1,304 acres paying Rs. 2,028 revenue.

The next two canals, the Sulemánwáh and Khánwáh, present a new feature—they only work when the summer level of the Indus is low. When the flood rises high, all traces of these canals are lost in the general submersion. The Sulemánwáh has its head in a side-channel of the Indus, here called Mochíwáká Dhand, from the village through which it passes. It was dug during the Baháwalpur government, and named after the Kárdár, Sulemán Khán. It irrigates 3,301 acres paying Rs. 3,866 revenue. It is 14 miles long. If the floods are moderate, fine rice crops are grown on it.

The last canal before we reach the junction of the rivers is the Khánwáh. It was dug during the government of Baháwalpur. Its head is in the village of Bosan and it is fed by the Khákhí Dhand. It irrigates 590 acres paying Rs. 702 revenue.

The canal geography of Muzaffargarh has now been described. There are other small water-courses and distributaries; for an account of these, and for a more detailed account of each canal, the canal record must be referred to. The canal geography is not very easy to grasp. The canals are very numerous, and the same names occur over again; but if their grouping into series is studied, it will be easy to remember them. The 11 Chenáb canals must be studied separately, for they admit of no grouping for two-thirds of the length of the district. The Indus canals arrange themselves into the following groups according to the side-channels by which they are fed:—

1. The Garkú or Matká group.
2. The Magassan group.
3. The Maggí group.
4. The Súk group.
5. The Dingá group.
6. The Chitá group.

South of this last remain the four independent canals—

Purán.
Suhráb plus Chhali.
Sulemánwáh.
Khánwáh.

There are six Nángwáhs or Nángní—one in the Garkú, two in the Magassan, one in the Dingá series, one is a branch of the Talíri, and the disused Nángwáh in the Chenáb opposite Alipur. All these are named from their snake-like tortuous course. There are five Sardárwáhs—one in the Magassan, one in the Súk, two in the Dingá

and one in the Chitá series. There are three Pírwáhs—one in the Magassan, one a branch of the Talírí, and one a branch of the Puránwáh. There are three Khánwáhs—one a branch of the Talírí, one a branch of the Purán, and one independent Khánwáh, the most southern of all the Indus canals. The Khánwáhs were all dug in the government of Baháwalpur, the ruler of which is here known as the Khan.

18. It has already been stated how exposed the district is to floods; in order to check them, a number of protective embankments have from time to time been erected. The most important protective works are those along the line of the Indus.

The largest of these begins at Kot Sultán, in the Dera Ismail Khan District, and, after a course of 28 miles from north to south, ends at Sheikh Umar on the bank of the Sardárwáh, which issues from the Magassan. It protects the northern part of the Sanánwán Tahsíl, and the town and neighbourhood of Muzaffargarh, from the floods of the Indus. All the canals of the Garkú and several of the Magassan series pass through this embankment, and are provided with masonry regulators at the points where they cross it. It was begun in 1872 by a combination of land-owners of the Sanánwán Tahsíl, and was finished in 1874 by the Department of Public Works.

Sheikhánwálá embankment runs parallel with the Chúan canal for a mile and a half. The Háji Ishák canal crosses it, and is provided with a regulator. This embankment protects the villages near Mahmúd Kot. It was made in 1880, and cost Rs. 2,000.

Between the southern end of the last-named embankment and the northern end of the Aráin embankment is a tract of unprotected country about 8 miles wide. The Aráin band begins in Habib Douná on the border of the Sanánwán and Muzaffargarh Tahsíls, and runs five miles south till it ends in the village of Gulkáim Mastoí on the bank of the great Sardárwáh, which issues from the Dingá Nála. It protects the country around Kureshí. It was made in 1875 by a combination of land-owners.

From the southern end of the Aráin embankment to the village of Bastí Lundá comes another unprotected tract of about 6 miles wide. The embankment, known as the Kínjar and Mahrá band, begins in Basti Lundá, a village just north of Kínjar, and runs south for 12 miles, and ends at the head of the Purán canal in Bet Káim Sháh. This band protects the country about Kínjar and the whole of the south of the Muzaffargarh Tahsíl. It was made in 1875 by the people. It is in bad order, and needs repairs. It requires to be supplied with regulators where the canals intersect it. Then occurs another unprotected tract of 14 miles. The Kot Ratá embankment begins on the bank of the Sulhráb

canal in the village of Bilewálá, and, after running 11 miles in a south-south-westerly direction, ends in the village of Jatói. It protects 26,544 acres paying Rs. 14,600 of revenue, the town of Jatói, numerous hamlets and three canals. The work was executed in 1879 by the villages protected, with the help of a money grant of Rs. 1,200.

Due west of the southern end of the Kot Ratá embankment is the northern end of the Alíwálí embankment, which begins in the village of Jagmal, and runs due south for 8 miles, and ends in the village of Bazwálá. It was erected in 1879 by the villages which benefited from it. This embankment protects 11 villages and parts of villages containing 11,131 acres assessed at Rs. 7,601, the town of Alípur, and the tahsíl, tháná and dispensary buildings.

19. The Alíwálí is the last of the Indus protection embankments.

Requirements of the district for protection from floods. It has been shown that there are a succession of these works along the bank of the Indus. Between them are considerable intervals of unprotected country. The northern part of the district is protected by the Sanánwán embankment, which is a very complete work, and is provided with regulators for letting the canals pass through the embankment. What the district requires for its thorough protection is that the Sanánwán embankment should be prolonged to the southern end of the district, and that regulators should be built where each canal crosses the embankment. The small embankments above described could be utilised by being absorbed into the line of the continuous embankment. If the side-channel of the Indus were improved so as to run throughout the year, and if the Indus embankment were made continuous along the whole length of the river, this district would have little left to desire in the matter of irrigation and protection from floods.

20. The floods in the Chenáb are much less destructive than those of the Indus. The protective embankments are fewer and shorter on the Chenáb than on the Indus.

The most northern is the Guthúwála embankment, which is one mile long. It is in the village of Murádábád, 10 miles north of Muzaffargarh. When the Chenáb is high, a flood finds its way inland at this point, and, flowing between the Ganeshwáh and Talíri canals, injures the country as far south as Muzaffargarh. To stop this flood, this embankment was made in 1879.

The Wafádárpur embankment was made in the time of the Sikhs along the bank of the Talíri canal. In 1876 the former bed of the Talíri was deserted and a new line dug. The embankment fell into disrepair. It was renewed in 1879-80. It is 5 miles long.

The Thatah Kureshí embankment was made in the time of the Sikhs to protect Khángarh and its neighbourhood. It is 3 miles long.

The Khángarh embankment. The Khángarh embankment was also made in the time of the Sikhs. It is 7 miles long, and protects Khángarh and Ghazanfargarh.

The Makhan Belá embankment. It has already been stated that the country round Rohillánwálí is so low that in flood-time the waters, both of the Indus and Chenáb, find their way into the interior of the district. To check the Chenáb waters at this point, the Makhan Belá embankment was made from Kot Dádan to Mochíwálí. It is 8 miles long. The Kínjar embankment tries to do the same duty by the waters of the Indus at the corresponding point on that river.

21. At a distance of 28 miles from the southern point of the district and equi-distant from the Indus and the Chenáb, the town of Khairpur stands in the centre of the country that is annually submerged. Khairpur is the largest town in the Alípur Tahsíl, and a place of considerable trade. To protect it from floods, a circular embankment 5 miles in length was made round the town. The embankment was nearly destroyed in 1874 and renewed in 1875.

22. The Government waste land deserves a mention here, only to avoid misunderstanding. If it were not for this, it would have no more part in an account of the physical geography than the small patches of Government cultivated land which there are in the district. The district is fairly well cultivated, and the cultivation, even in the Thal, is generally equally distributed throughout the country. The district does not, like the other districts of the Mooltan Division, consist of a fringe of cultivation on the banks of the rivers enclosing vast tracts of waste land. I don't suppose that in the extra Thal country at any time within the memory of man, a block of ten thousand acres of waste land could have been discovered which was not intermixed with cultivation and habitations. In the Thal only, one block of 113,613 acres could with difficulty be formed into a rakh, and even that includes cultivated land. The misapprehension referred to is the idea that this district is similar to Mooltan, Jhang and Montgomery with their immense inland tracts of waste land. One of the greatest administrative mistakes that was ever made, and the disastrous effect of which has only just been removed, was to direct the waste land and grazing-tax in Muzaffargarh to be brought under the same system as that in force in the other districts of the Mooltan Division. Similar mistakes are constantly occurring. The total area of the Government waste, by the statements of the settlement just concluded, is 311,554 acres. The demarcation of the rakhs was effected for the last time at this settlement, and will be referred to when the operations of the settlement are described.

23. The great feature of the climate is its exceeding dryness. From May to September the heat during the day is intense, but a cold wind springs up regularly at about eleven, which makes the nights very endurable.

From November to February the cold is great and severe frosts occur, which injure the cotton, mangoes and turnips. The following statement of rainfall has been compiled from the official returns. I am very incredulous about the years which show as high a rainfall as 20, 21, 24 and 29. This score must have been made in the days when Tahsildárs thought tenths were inches. Judging from the experience of the last 7 years and from the rainfall of the neighbouring districts, I should say the average rainfall was 6 inches. From June 1879 to June 1880 only one-tenth of an inch fell. The distribution over the year is usually as follows :—

There is a shower or two in December and January, another in March and April; severe hailstorms often occur in these months. Another fall or two occurs in July and August, sometimes as early as June. If the district gets the rainfalls as I have described them, it has received its fair share.

Statement showing the yearly rainfall in each tahsil, from 1861-62 to 1879-80.

Name of Tahsil.	1861-62.	1862-63.	1863-64.	1864-65.	1865-66.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	Total average of 19 years.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Muzaffargarh	4.7	3.9	9.6	7.6	2.1	1.1	6.4	4.5	6.2	5.9	4.6	7.4	7.5	5.6	5.4	10.7	10.6	2.1	1.5	6.1
Alipur ..	2.5	3.4	4.8	5.4	..	1.3	6	1.9	29.4	5.1	2.1	12.1	9.5	16.7	4.9	18.9	19.1	17	1.6	8.6
Sandánwán ..	4.9	12.7	12.1	21.9	1.3	10.9	22.2	22.2	24	20.4	5.3	7.6	4.8	10.5	7.6	3.1	2.9	10.3	3.1	10.9

Following notes on the health of the district have been furnished by Connor, who has been seven years Civil Surgeon :—

“ The diseases most prevalent in the district are malarial fevers, skin and eye diseases, enlarged spleens, bronchitis, pneumonia and ulcers. The fevers, intermittent and remittent, prevail from September to the middle of December, the worst month being generally October, during which month very few escape one or more attacks of either one or the other form of it; they are not severe in their nature, but when once attacked by either, repeated relapses are frequent; this in the end leads to sequela in the shape of dysentery, bronchitis, pneumonia, and enormous spleens, and thus often causing death indirectly. Skin and eye diseases prevail throughout the hot season; they are due to heat and the careless and dirty habits of the people. Next to fevers, these are the most common diseases of the district. Bronchitis and pneumonia prevail from November to April; they are very severe and fatal, and, I believe, are more frequent in this district than in any other in the Punjab. The causes appear to be the great range of temperature during the cold months, the want of proper clothing, and the generally impaired state of the constitution of the people from previous repeated attacks of fever. I believe that a very great proportion of the deaths during the cold months is due to these two diseases, though fever is generally stated to be the cause.

“ Ulcers are very common throughout the year; they are usually very large and sloughing, and difficult to cure, and often originate from a very trivial cause, such as prick, scratch, pimple, or sting of an insect; people with enlarged spleens being particularly liable

to them. Enormous spleens, the sequel to repeated attacks of ague, are met with everywhere, especially amidst the *karárs* and poorer classes. Eventually this disease is indirectly the cause of much mortality in the district. Dysentery and diarrhoea are not common, and cholera is almost unknown. Small-pox is occasionally very prevalent during the spring, and measles more so. Stone and goitre are often met with. Europeans, as a rule, enjoy very good health in the district.

"The rule of health prescribed by indigenous medical authority is as follows :—

Chetr Visákh ghume.
Jeth Hárh sumbe.
Sáwan Badrá dhánwo.
Assú Katen thorá kbiwo,
Tabibán pás na jie.

"Travel in Chetr and Visákh (March to May), sleep in Jeth and Hárh (May to July), bathe in Sáwan and Badrá (July to September), eat little in Assú and Katen (September to November), and you will not have to visit a doctor."

24. There are no metals found in the district, and the mineral products are extremely unimportant. Kankar is occasionally seen, but in such small quantities as not to be worth collecting. Earth salt used to be largely manufactured during former governments, but is now prohibited. The descendants of the old Nunáris, or salt-makers, are common. The majority have taken to agriculture, but not a few have become charcoal-burners. Saltpetre used to be made in the district. In 1861 there were 27 saltpetre pans in the district, paying each Rs. 4. There was an establishment, costing Rs. 120 a year, to look after the destruction of the edible salt involved in making saltpetre. It is not surprising to find it reported in the same year that the manufacture ceased.

25. The following are the well-known divisions of soils. The classification is based on the proportions in which sand and clay are combined in the soil. Soil impregnated with salt has a separate name. Every soil is underlaid with sand at a greater or less depth :—

1. The best soil is milk. It is a rich friable loam of a soft brown colour, and produces good crops of all kinds. The substratum of sand lies at a considerable depth.
2. Gas or Gasár ranks next to milk, from which it differs in containing a greater admixture of sand.
3. Draman or dramar consists of a thin layer of clay on the surface with sand below. It requires constant irrigation, but with plenty of water produces the best crops of indigo. It is easily exhausted, and after bearing a crop is often allowed one or two years to recover before another crop is grown.
4. Retlí or Taplí is a soil in which sand preponderates largely. It is not, however, necessarily an inferior soil, with abundant irrigation; it bears first-rate wheat and indigo. The wheat crops in the Thal, where this soil abounds, if the rainfall is large, are heavier than in any other part of the district.

5. Rapar or Rap is a hard stiff black sour clay soil. It dries slowly and splits into large clods as it dries. Seed germinates slowly in it, and it requires plenty of irrigation to bring a crop to perfection. A local proverb describes the esteem in which it is held :

" Rapr Raháwan maghaz khapáwan."

" To cultivate Rapar is to waste the brain."

Still Rapar bears good crops of rice and Sánwak.

6. Kalar, kalar shor and kalaráshí is a soil impregnated with salt. One certainly does see some very ugly kalar, but it is a much maligned soil. All lands in the district contain salt, and even the best sugarcane land will get the powdery surface which denotes kalar, if left uncultivated for a year or two. Though kalar shows itself in a salt efflorescence, yet it is here distinct from that waterlogged condition of soil known in Hindustán as Reh. In this district canal-irrigation cures kalar. The waterlogged state of the soil caused by percolation has no particular name, but the excessive percolating water is called Somán, and produces all the bad effects on crops which are described in the Reh blue books and pamphlets. On the whole, the soils of this district are good, so uniformly good indeed that the divisions are lost sight of. Land is productive or the reverse according as it gets abundant or scanty irrigation. As in the neighbouring districts, the classification of soils was abandoned for assessment purposes, and the different kinds of irrigation formed the basis of the sanctioned rates of assessment. Though the Muzaffargarh farmer will not admit that his soils or indeed anything else is good, still the general excellence of the land forcibly strikes experienced Settlement officials from the Punjab.

26. Although so dry, the district is full of vegetation of great variety. The following is a complete list of vegetation trees. The trees :—

Tálhi (Shísham in Hindustani), *Dalbergia sissu*. I have nowhere seen this tree grow with such luxuriance as it does in this district. There are two fine avenues—one five miles long, leading from Muzaffargarh towards Shershah ferry ; the other from Muzaffargarh to Khángarh, eleven miles long, which were planted by Captain Voyle, Deputy Commissioner, in 1854. Some of the trees have reached a girth of 9 feet. There are older trees of 14 feet in girth.

Kíkar, *Acacia Arabica*, suffers much from frost, but where it escapes this danger it grows into a very fine tree. The wood is much used for agricultural instruments.

The young branches of the kíkar, bér and jand are cut as fodder for goats and are called "lángi" and "lung."

The sarính (Hindustáni siris), *Acacia speciosa*, grows badly in this district. It sometimes reaches a large size, but the wood is always much worm-eaten.

The jand or kanda, *Prosopis specigera*, is the commonest tree in the district. The rakhs are full of it. Where it escapes being lopped, it attains a fair size, but it is generally stunted and deformed from being cut for lángi. The pods are called shangar, and are used for food. Hindu bridegrooms generally and a few Muhammadans cut a small branch of a jand tree and bury it before marriages. Offerings are made to the jand tree by the relations of Hindu small-pox patients during an attack of small-pox. The wood is used for agricultural implements and fuel.

The bér, *Zizyphus jujuba*, is common, and attains a large size. Near Rohillánwáli are some very fine trees. The dried fruit is called bhugrián.

The ukánh, *Tamarix orientalis*, is called túlha while young. It thrives everywhere, and is propagated with ease. A branch stuck in the ground will strike if it gets a little water at first. The manna of this and of the lei is called shaklo. The galls, "main," are used for dyeing and tanning.

The lei, *Tamarix dioica*, called pilhhi in the Punjab and jhau in Hindustan, grows spontaneously wherever river water reaches. The river banks are lined with thickets of it. In classifying land it is an axiom among Tahsildárs that land which grows lei is culturable. Lei is used instead of masonry for lining wells and for making baskets. It is usually a mere bush, but in the Thal, west and north of Mabmúd Kot, it grows to so large a size as to be worth selling as fuel for steamers.

The jál, *Salvadora oleoides*, grows spontaneously in the Thal and in waste land. The wood is of little value, as the proverb says—

Na kam dá na kár dá,
Ajáya chughá jal da. =
Of no good and of no use,
Like a worthless log of jál.

The fruit is called pílh, plural pílhún, and is largely eaten by the natives. The dried fruit is called kokir. The leaves and twigs furnish fodder for goats and camels.

The jhit, *Salvadora Indica*, is common in the south of the district, especially in the inundated parts. I never heard of jhit being put to any use except to make tooth-sticks, "musák," for which use its bitter wood makes it a favorite.

The karính or karítá, *Capparis aphylla*, is common in waste land. It makes rafters and fuel of an inferior sort. The flower is boiled and eaten as a vegetable.

The name of the fruit is delhá. It is made into pickle.

The ubhán or bahán, *Populus Euphratica*, grows spontaneously on the banks of the Indus, lower Chenáb, and Sutlej after its junction with the Chenáb, where it escapes lopping; it attains a large size. Its young branches provide fodder for goats. The wood is light, and consequently is used for making beds, door-frames, bair wheels for wells, and rafters.

The Phog. Phog, *Calligonum polygonoides*. Its habitat is in the Thal where it is very abundant. It is a small leafless shrub. The wood makes excellent charcoal. The twigs provide fodder for goats and camels. The fruit ripens in May. It is called phogli, and is both cooked as a vegetable and made into bread.

The Khip. Khip, *Orthanthera himinea*, is a leafless shrub which grows chiefly in the Thal, though I have seen it elsewhere. I never heard of its being put to any use. It is very inflammable: if two pieces are rubbed together they will catch fire.

Ak. Ak, *Catotropis procera*. Perhaps this should not be classed as a tree, but I have seen specimens 10 feet high with wooden stems nearly a foot in girth. It is usually a shrub. Goats and sheep eat the leaves.

The trees before mentioned are those commonly seen. The following are more rare here, but as they are common Indian trees they require no description:—

Pípal, *Ficus religiosa*.

Bohir, *Ficus Indica*.

Amaltás, here called gardnalí, *Cathartocarpus fistula*.

Lasurá, *Cordia Myxa*.

Rohirá, *Tecoma undulata*.

Gondí, *Cordia rothii*.

Jáman, here called jammún, *Sizygium jambolanum*.

Chhiehhrá, *Butea frondosa*.

Phulái, *Acacia modesta*.

Kábalí Kikar, *Acacia cupressiformis*.

Sohánjná, *Moringa pterygosperma*.

Pipals and bohirs should be more abundant than they are, for they were carefully preserved by Diwán Sáwan Mal. No one could get leave to cut a táhli tree, even in his own land, without a personal application to the Diwán, and without paying the full price. Even a kikar or ber could not be cut without obtaining the permission of the Kárdár and paying the full price of it, but to cut a pipal or bohir was absolutely forbidden and entailed severe punishment.

Garden trees. The garden trees are mangoes, pomegranates, apples (here called súf), oranges, limes and figs. The mangoes are superior, and are largely produced. The town of Muzaffargarh imports 500 maunds a year. Mango gardens are common

in the neighbourhood of Khángarh, which is said to produce 2,000 maunds of mango fruit a year, 500 are consumed in Khángarh town and 1,500 maunds exported to Mooltan. Mangoes sell at from 16 to 24 sérs per rupee.

27. The most remarkable plant in the district is the date palm, *khaji*. The fruit forms a staple of food during part of the year. Every part of the plant has a separate name and a separate use. The trees pay a tax to Government, which furnishes a considerable revenue. The *khaji* grows in every part of the district, and flourishes in the poorest soil. Dates are divided into *nar* (male), *mádá* (female), *khasí* (neuter), and *bogh*, which means in Arabic a casing, and, applied to dates, means stoneless. In February, one or more spathes issue from the root of the terminal cluster of leaves. The spathe is called *sipí* (a shell). As the spathe opens, clusters of tendrils (*mál*) emerge, covered with little white waxy balls which are the flower-buds. The clusters are called *gosha* and the buds *búr*. In April the fruit is the size of a pea, and is called *makorá* or *pippún*. At this stage birds begin to eat the dates, and do great damage. In July the fruit has attained its full size and is called *gandorá* or *doká*, and those dates are gathered which are to be ripened by being salted called *Lúní pind*, "salted dates." In July and August the fruit is completely ripe, and is called *pind*. A few ripen later in the month of Badra (August-September), and are hence called *bádrí*. A proverb gives a *memoria technica* for the various stages:—

Visákh Makorá, Jeth gandorá,
Hárh Doká, Sáwan pind,
Bádrá áyá te kadh giá
Khajíwálián de jind." —

"In April-May Makorá, in May and June gandorá.

"In June-July Doká, and in July-August Pind.

"August and September came and took away

"The Date-eater's life."

Dates are consumed in three forms:—

1. *Lúní pind*, "salted dates."

These are picked when unripe and ripened by being rubbed with salt, and being kept for a day in a tightly-closed jar.

2. *Van-de-pind*, *i. e.*, dates of the tree. Dates which ripen naturally on the tree.

3. *Chírvánpind*, *i. e.*, split dates. Inferior dates are split open, the stone is taken out, and the dates are dried.

Dates are either cultivated, in which cases they are called *Hath rádh*, or grow spontaneously, when they are called *apere jamián* or *gidá-ríán*, from a story that they have sprung from stones which jackals have thrown away after eating the fruit. At the end of April, watchers called *rákhás* are hired to watch the fruit. A *rákhá* receives from Rs. 3 to 5 per month, a quarter or half a sér of ripe dates in the season, and as many fallen dates as he can eat. A *rákhá* can watch 200 trees if they are sparse, and up to 400 if they grow thickly. Dates are also preserved by the clusters being enclosed in net work bags made of grass, which are called *tora* or bags of matting, made of the *pinnæ* of the date tree, called *bindí*.

When the dates ripen, pickers (*chárhá*) are hired. A picker gets from Rs. 4 to 8 per month, a sér of ripe dates a day, and as many dates as he can eat while up on the tree. Around Muzaffargarh he gets 2 chittaks of onions per day and 5 yards of cloth. The picker keeps himself in position at the top of the tree by a thick rope which passes round the tree and under his seat. The rope is called *kamand*. Picking looks more dangerous than it really is, still there are accidents every year. Pickers are allowed by the owners to give a handful of dates to each passer-by. A handful is called *pánjá*. Hence the date season is a favourite time for pilgrimages, because the pilgrims need not take food with them, and can subsist on the *pánjás*. The picked dates are taken to an enclosure called *khori*, and are exposed to the sun for four days, after which they are ready for storing or export. Dried dates will keep good till November, after which they breed worms. Another mode of drying dates is to boil them in water, then throw away the water, add a little oil and fry the dates till quite dry. In this state dates will keep a year. Such dates are called *bhugrián*.

Date trees vary in productiveness, some will bear as much as three maunds. From a number of experiments made by me in 1878, I found that a date tree had from 2 to 20 clusters, and the average crop was 20 sérs. I have, however, seen very much heavier crops than those I experimented on. The Extra Assistant Settlement Officer gives a maund and a quarter as the average crop.

The different kinds of dates are very numerous, and are hardly to be distinguished from one another. I have specimens of 29 kinds before me, and with the exception of one kind called *shingist*, which is long and of a bright yellow, the others seem to me all the same.

Every part of a date tree has a separate name and a separate use. The stem is called *mundh* while standing, and *chhándá* when cut down and trimmed of its branches. It is used for rafters, and, when hollowed out, for aqueducts. A cluster of stems springing from one stool is called *thadá*, and a grove of dates is *jhat*. The leaf stalk is called *chharí*, and is used for making fences, frames and such light wood-work as in other parts would be made of bamboo. It is also beaten into fibre and used for making ropes. The *chharís* are cut every year, and the stumps are called *chhodá* and near Rangpur *daphi*. The pinnæ are called in the south of the district *balutrá* and in the north *phará*. They are used for making mats, baskets, fans and ropes. The rete or net-work fibre that is formed at the base of each petiole is called *kabál*, and is used for making ropes. The fruit stalk, with the fruit on, is called *gosha*, and *buhára* after the fruit is picked when it makes an efficient besom. The cluster of leaves at the top of the palm is called *gáchá*, and in the heart of it is the terminal cabbage-like head called *garí*, which is edible. The date-stone is called *gakar*, *gakat* and *geka*. The thorns are *thúhá*.

When a date palm begins to fall off in bearing, it is severely

Diseases of date palms
and their fruit.

scorched, which is said to restore productive-
ness. Palms growing in sandy soil often dry
up without any apparent cause. This disease
is called *bará*, a local name for fever. Worms of various sorts attack
the fruit while still on the tree. The best known of this is called
susari. It is exactly like a weevil. The greatest enemy of the date is
continued rain, which, when it occurs, completely destroys the crop.

The people eat dates for four months in the year. They eat them

Dates as food.

at their meals, and at all times of the day and
night besides. Poor people subsist on dates
altogether during the season. In the south of the district, dates are
pounded, mixed with flour and made into bread. Dates are sometimes
mixed with tobacco and smoked. People eat dates till they are
surfeited, and then chew a raw onion and begin eating again. When
it is remembered that there are 414,509 female date palms in the
district, and that the average crop is a maund and a quarter, it will be
seen what a large staple of food dates form. The jama assessed at
the Regular Settlement on the date trees is Rs. 19,126. An account
of the revenue, past and present, derived from date trees will be given
hereafter.

28. The following are the most common and esteemed fodder

Fodder plants.

plants. *Tala* grows everywhere except in
kaler and sandy soil. *Tala* is the *dub* of Hindu-
stan. It is an excellent grass for fodder, and is a sign of good soil.
Chhembhar in sandy soils takes the place of *talá* as a fodder grass.
It is a prostrate grass that sends out runners. It is surprising to see
how fast it grows in the *Thal* after rain. It is excellent fodder.
Drabh is a strong coarse grass with long roots. It grows in all
kinds of soils, even in the poorest, and remains green all the year round.
It is difficult to eradicate. The agriculturists liken themselves to it
in the proverb :—

"Zamindár drabh dí pár him" =

"Ruler changes, but the zamindár lasts for ever."

Madháná is a rain grass of excellent quality while it lasts. It is
so called because its flower resembles a *madhání* or churn-dasher.
Tarar or *makhnala* is another rain grass, and is much liked by
horses. *Kal* or *kabbá* is also a rain grass, and is excellent fodder
while green, but it soon grows hard and uneatable. *Lihú* is a
thistle, and grows abundantly among the *rabi* crops. It is grazed,
and also cut and given to cows and bullocks to eat. *Visá* is a spreading
fleshy leaved plant which grows in the rains. It is eaten by all animals
except horses and asses. This is the plant elsewhere called "*itsit*."
Sinjhi is a plant like clover, which bears a yellow flower. It grows
wild among the *rabi* crops, and in parts is cultivated. There is a
species with white flowers which is said to give colic to cattle. *Jandal*
is a plant that grows among wheat and barley, and until seed time
it cannot be distinguished from them. The seed, however, is small and

tasteless, while green, it is good fodder. Dodak is a small milky plant which provides fodder for sheep and goats only. The butá is the *Saccharum sara*, often wrongly called sarkáná and munjkáná, which are really names of parts of the plant. This is almost as useful as the date-palm. The wavy leaves at the base of the plant are called sar, and, besides being good fodder, are used for mats and thatch. The tall stem is called kanán, and the upper part of the stem tili. Kánán is used for making baskets, chairs, walls of huts, screens, roofs, rafters, and fences. The tili is used for making baskets and besoms. The sheath of the tili is múnj, and is used for making ropes. The flowers are called bullu, and are given to cows and buffaloes to increase and enrich their milk, and are hence called "makhan sawái" or "butter one and a quarter more." Kánh is the *Saccharum spontaneum*; it is very abundant in the low ground near the rivers which is annually inundated, and in the islands. It furnishes first-rate fodder for buffaloes—and pens are made from the stem. Kháwi is a grass which has a faint lemon smell, it is found in the Thal. Dílá is a rush which grows in marshy grounds. It is inferior fodder. Murak is another marsh plant, it is soft and tender, and much esteemed as fodder. Juság is a plant which is used as fodder and also as a pot-herb it is said to soften other vegetables and meat which are cooked with it. Láná is used in this district only as fodder for camels. Sajji is not made. I am not aware which of the kinds of "láná" it is which grows here. Camel-thorn, here called jawánh (Hindustani jawása), is common. The following plants, which are mere weeds, are also used as fodders:—kharpel, manjhár, sávre, mainán, bhúkaa or bakan, batún or bathún, pit páprá, sún, palwáhán, and patráli.

29. The following are the most common plants, other than fodder plants. The line between fodder and other plants is not very clear, for camels and goats will eat anything. Bhakrá, Hindustani gokhrú, (*Tribulus terrestris*) grows generally in sandy soils; it has a caltrop-shaped seed-vessel. It is used to cure gonorrhœa. Puth kandá, literally "inverted thorn" (*Achyranthes aspera*) is common in Sanánwán. The leaves are dried, made into powder, and used as an emetic. Damánh (*Eragrostis ciliaris*) is found in the Thal during summer. Camels eat it, and medicine is prepared from it to check impurity of the blood (malái). Karvilún (*Capparis korida*), the fruit ripens in March and April and is made into pickles; leaves are made into fomentations for sore-throats. Ratkán grows in summer on the banks of the canals, it is used in diseases of horses. Kurtamán, the colocynth gourd, grows in the Thal and in sandy ground, during June and July. It is a favourite medicine for horses. Kanderi, a plant with thorns on the stem, leaf stalks, and leaves with a fruit like potato apples. Phisák, lání (*Suaeda fruticosa*) is eaten by camels, and medicine is made of it to relieve the load on the chest of pregnant women. Harmal (*Peganum harmala*) grows everywhere. The seeds ripen in August; mixed with bran and salt, and burnt, they are efficacious in driving away jins and averting the evil eye and the machinations of enemies. Lút is a parasitical creeper of a light-

green colour, that grows on the upper branches of trees. It kills the tree to which it attaches itself. Bhuen phor, literally the earth-splitter, (*Philipara calatropidis*) this curious plant is very common. In February and March, its stem about an inch and-a-half thick, bursts through the ground, sending fissures all round, and grows from 6 inches to a foot high, and is covered with handsome wax-like flowers. The whole plant is very juicy. It is given to goats to increase their milk, and, when bruised, is applied to boils. It is also given to children to cure impurity of blood. Sítún (*Boncerosia edulis*) is a kind of wild asparagus, which, after summer rains, springs up at the roots of the jál, jand, karita, and phog trees. It is eaten with salt and also cooked as a vegetable. It has a pleasant acid taste. Chibhar is a small gourd that grows wild among the kharif crop. The fruit is eaten raw, and cooked with meat, on which it is supposed to have a softening effect. Chibharen dí bár, the "threshing floor of chibhar," is used commonly for the "Greek kalends."

"Chibharen dí bár te desi."

"He will pay it at the Chibhar threshing floor," i. e., he will never pay it.

Jatí muság, literally the "Jat's tooth brush," is a small plant with pink flowers, that grows on land subject to inundation. Bhangrá is of two kinds, one kind has blue flowers of which women make collyrium. The other kind grows on the banks of water-courses, and when reduced to ashes, is used for curing galls on bullocks caused by the yoke. Uthpera, literally "camels' foot-prints," is a plant with broad leaves that grows in the Thal. The leaves are dried, pounded and boiled, and used internally for gonorrhoea. Fatokar grows in the hot weather. Its leaves are used by bald men as a hair restorer, and are also good for boils. Bhúkal, literally "buds of the earth," is a plant very like an onion which comes up with the rabi crops. It bears a small black seed which ripens just before the wheat harvest. In times of scarcity, the seeds are ground and made into bread of a repulsive appearance, and very indigestible. Khumblú, mushrooms, are common in the Thal after rain in the hot weather. They are of very good flavour. Pad bahera is the name for fungi of all sorts. Other plants less known are—

Gorakhpán, dandeli, tandúlá, marirí, reshan, van verí, sijh ubhárá or sunrise, salará, kaurí valh or bitter creeper, piplí, kaláúch buti, níl buti or wild indigo, gídar wár or wild cotton, angári, kánjún, bai phalli and bathún.

30. The domestic animals are camels, buffaloes, cows and bullocks, sheep and goats, horses and donkeys. The Thal Fauna : domestic animals. furnishes a magnificent grazing-ground for camels which eat the jál, jand and phog, with greediness. Buffaloes are found in large herds in the low lands near the rivers, and are very freely stolen. A regular organisation existed for passing stolen buffaloes up, down, and across the rivers. There were, and probably are, regular stages and appointed receivers at each stage. The cows and bullocks

are very poor. Though this district has good grazing powers, yet, strange to say, it cannot keep itself in working bullocks, which have to be imported from Sindh, Baháwalpur, and the southern part of the Dera Gházi Khan District. The bullocks are badly cared for, ill-fed, and never clothed in winter. The Jat seems to find it more economical to wear out a bullock and buy a new one than to prolong its life by care. The sheep of the Thal are a very fine breed, large and fat; the wool, however, is very coarse. The sheep in the rest of the district are very poor. The Thal goats are fine and good milkers. Those of the rest of the district are not remarkable. There are a number of good mares in the district. Horses are not valued, and colts are often neglected to death, or given away as alms to Mirásis. The district has been neglected as regards its breed of horses, but horse and donkey stallions have this year (1880) been sent to the district.

The following statement shows the number of cattle of all kinds in the district:—

Buffaloes.	Cows and bullocks.	Sheep and goats.	Horses.	Donkeys.	Total.
47,070	157,382	144,870	3,785	5,179	358,286

It is impossible to give the number of camels, because of the difficulty in deciding what camels belong to the district and what belong to other parts. The majority are owned by wandering Jats, whose home is the whole Sind Ságar Thal, rather than a single district. The camel grazing tax may afford an indication of the number. Each male camel pays Re. 1, and each female Re. 1-8 a year. The lease of the camel grazing tax has varied from Rs. 9,394 to Rs. 6,876 per annum. These figures exclude the last two years, during which the district has been drained of camels for Kabul. In 1880 the lease fetched only Rs. 3,636.

All the diseases described in the Montgomery Settlement Report prevail here, and are known by slightly different names. Cow-pox, here called thadri, máí ráni, and sitla, is by far the most fatal. To the diseases given in the Montgomery report I may add patha, a common Punjab disease, on which much has been written in the Financial Commissioner's Selections. There it is attributed to eating jawár only. Here it does not seem traceable to any particular kind of food. I have seen camels get it after eating lei branches, and bullocks after eating turnips. Míhrú is a maggot which cuts its way through the hide of the back into the flesh, and grows to a great size, an inch long and as thick as one's finger. It is said to do no harm, but the flesh swells and the presence of a number of these maggots in the flesh must disorder the system. It seems only to infest cows and bullocks. Chourímár, literally the "shoulder striker," is a kind of paralysis of the

limbs. Pán is the name for itch. Gal ghotu, malignant sore throat, is common and very fatal. Muhárá or múnkhur, foot and mouth disease, is extremely common. The remedies for all diseases are either (1) counter-irritants, as cruel branding, cutting off part of the ear and putting irritating substances into the nose and ears, (2) superstitious, as getting a fakír to charm the animal, and taking it to a shrine, or (3) inert, as giving ghí or urine to drink. The extravagant remedies used in Montgomery, such as opium, sweet oil, fowls, eggs, and gúr, are not appreciated. The diseases which cause most deaths are thadri, chounímár, and gal ghotu.

31. Tigers are often met with in the dense jungles on the banks of the Indus, towards the south of the district. They do considerable damage to cattle, but rarely attack man unless in self-defence. Still, a case occurred in 1879 of a boy being wantonly killed by a tiger in Bet Isanwála. The local name for tiger is shính. Wolves, here called nahar, are found throughout the district, and wild pigs are extremely common, especially on the banks of the rivers. Wild boars are called mirhún, and wild sows bhúndin. The only deer in the district are párbá or hog-deer; the Indian gazelle, here called haran and in Hindustan chikará; and the swamp-deer (*Rucervus duvaucellii*). The latter is nearly extinct, its local name is goin. Jackals and foxes are common. Hares are very rare. Otters are found in the south of the district. Hedge-hogs, here called jahá, are common. I have never seen or heard of porcupines here. Mongoose, called here nolon, are very common.

32. The following birds are found in the district. Of many I can only give the native name and must leave it to a better ornithologist to classify. All I can vouch for is that the spelling of the local name is correct:—

Doves. The male is gerá, the female tutin.

Sparrows. Native name chiri.

Hoopoe. Local name hudhud.

Wood-peckers. Local name drakhan pakhi, literally the "carpenter bird." The hoopoe is often called by this name.

Peewits, here called tatirí.

Warty-headed Ibis

... Káoni.

Tern

... Karáhi.

Sand piper

... Titúhá.

Pelican

... Pein. There is a larger kind called Sohal pein.

Indian snake-bird

... Siri.

Crows

... Kán.

Lark

... Chandúr.

Kite

... Hil.

Hindustani chíl. In popular belief, the kite is female for six months of the year, and male for the other six months.

Vulture	...	...	Gijh.
Pharaoh's chicken	...	...	Súnda.
Blue jay	...	...	Chánh. Its flesh is good for colds. To hear or see a blue jay is a bad omen.
Magpie	...	...	Mahtáb.
Striated Bush Babbler	...	...	Herha.
Bengal Babbler	...	...	Dad herha.
Parrot.			
Butcher-bird or shrike	...	...	Malhála. Both the grey-backed and red-backed species are found. To see a butcher-bird fly is a good omen.
King crow	...	...	Kál karachí. This bird is venerated by Muhammadans because it brought water to Imam Hussain when he was martyred, and also on account of its habits of early rising.
Swallow	...	...	Abábil.
Kingfisher	...	...	Tobá literally "diver" and mamola.
Egrets and paddy-birds	...	...	Bagla and bag. The young are eaten and considered fattening.
Coot	...	...	Ari.
The Blue Coot	...	...	Kuang—Water rail is khanauti.
Indian Oriole	...	...	Hariáwal.
Avadavats	...	...	Lali and shárák lali. The last name literally means lali weighing a chittak.
Spoonbill	...	...	Doi bag. Literally spoon heron.
Heron	...	...	Sán.
Raven	...	...	Dodar kán and ruhela kán.
Owls, owlets, and goat-suckers	...	...	Ghugh, ulú, chebrí, and huk. Owls and goat-suckers are birds of bad omen. The owl called ghugh is called the kiraká shinhor Kirár's tiger, on account of the superstitious dread in which Kirárs hold it.

The other Raptores are—

Kural	A large hawk found near water. It lives on fish and wild fowl.
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Baz, male.
 Bashin, male.
 Chapak, male.
 Laghar.
 Tamtrá.
 Chuhemár.
 Shíhan.
 Charag.
 Bhairi.

Jurra, female.
 Basha, female.
 Shikra, female.

which are all hawks of different kinds. Cormorant, Khambra.
 Bittern is here called nardúr. The Grebe is tuháyá.

The birds for which I know no English equivalent are—

Garwának, also called saukan, Lives on the banks of rivers and in sandy deserts.

Níl bulái Lives on the banks of rivers and near water. A kind of water-rail I think.

Dhíng ...
 Bad dhíng } Very large crane-like birds which
 ... } ... } congregate in flocks during the
 ... } ... } cold season.

Bulbuls These are common to all India, and are great pests to the gardener.

Phidá

Dhúrí A small ash-colored bird with a long tail.

Chhapákí An ash-colored bird, the size of a dove. If a person who kills a chhapákí touches another with it, it will be cured.

Tilyar. Vaha. The tilyar is, I believe, a starling, and the vaha, though differing in color, is like a starling in its flight. Both are great enemies to the farmer and are very destructive to dates.

Traklá. This is, I think, the green pin-tailed fly catcher. It is named traklá from a fancied resemblance to the spindle, trakla, of a spinning wheel.

Game birds. 33. The game birds and those usually shot by Europeans are —

The florikin (*Houbara macqueeni*), here called tilór.

Sand grouse.

Partridges black and grey. The female black partridge is called missi.

Quails arrive in great numbers in March and September, but soon disappear. A few remain all the year.

The common, the jack and the painted snipes—

The wild goose, Mangh
 Mallard, Nirgí
 The spotted billed duck, Hanjhar
 Gadwall duck, Buar
 Shoveller duck, Gena
 The marble-backed duck, Bhurnú
 The Brahminy duck, Chakwa
 The common teal, Karara
 The shell drake or {
 burrow duck { Dáchí
 The white-eyed duck, Ruhárí
 The whistling teal.

Kunj and plover are common in the lowland near the rivers. The plover is called puliani, "the weaveress," from its gait. It makes a short rapid run, and then stops like a weaveress when preparing her thread.

Pigeons are found all over the district.

34. This district abounds in fish of very excellent quality. The species are not very numerous. I believe the following to be a complete list:—

Fish.

Kanghi (*Ambassis baculis*). This is the only member of the perch family found in the district.

Of the snake-headed fishes two specimens are found.

Chitra (*Ophiocephalus marulius*). This is the sahol or saul of the Punjab.

Guddú (*Ophiocephalus punctatus*). Hindustani and Punjabi garai.

The chitra attains three feet in length. The guddú about eight inches. They have few bones, but are insipid eating.

The spiny eel has two representatives—Goj (*Mastacemblus armatus*); Gujirá (*Mastacemblus pancalus*). Both are good eating and excellent when stewed.

The siluridae have ten representatives that I know of, and probably more. They are scaleless and good eating, but are as a rule filthy feeders. They will take a baited hook or a spoon bait readily.

1. Singhárá (*Macrones aor*)
2. Malhir (*Macrones tengara*)
3. Khágar (*Macrones cavasius*)
4. Khagá, also called Triandá (*Macrones carcio*)
5. Ahí (*Pseudotropius atherinoedes*)
6. Dhungana (*Pseudotropius garua*)
7. Dimman (*Callichrous checkra*)
8. Ghoghún (*Callichrous bimaculatus*)
9. Malli, Wallago attu. The boali of Punjab and Hindustan.
10. Luámkh (*Saccobranchus fossilis*)

Hindustani singi. A very ugly fish with eight long thick barbels; each pectoral has a poisonous spine which is said to cause a wound as painful as a scorpion's sting.

The carp family has ten representatives that I know of, and probably more. They are all excellent eating and clean feeders.

Dambhara (*Labeo rohita*) the ráhú of Punjab and Hindustan. This is the best of all the fishes for eating.

Dahí (*Labeo calbasu*)

Saríhan (*Labeo cursa*)

Thaila (*Catla buehanani*)

Morí or morákí (*Cirrhina mrigala*)

Sohnín (*Cirrhina reba*)

The thaila and morí rank next to the dambhará for eating.

Poprí or kharnín (*Barbus sarana*)

Drurá (*Barbus chrysopterus*)

Dará (*Rohitee cotio*)

Paráhi (*Chela gora*)

The herring family has only one representative, the chhuchi clupea chapra.

The notopteridæ have only two species.

Pari or batti (*Notopterus chitala*.) It has a number of eyelike marks near its tail.

Kání pari, or kání batti (*Notopterus kápirát*), literally the one-eyed pari or batti, so called because the eyelike spots near the tail are wanting.

Both the notopteri are full of bones and tasteless.

Besides the fish before mentioned, there is the shahíngar, a small scaleless fish with five dorsal rays, headed by a spine, 10 ventral rays, pectoral fins headed by a spine, four barbels, adipose fin, back yellow with black stripes, whence comes its name shahíngar or tiger-fish, from shính, a tiger. This is probably one of the glyptosternum genus. A fisherman assures me that the following fish with which I am not acquainted complete the list:—

Chhallí

Lákhí gógún

Tukar machhi

Gulá

Patol

Khitha

Makhni

The gángat is a large prawn, and jhingá is a shrimp.

It may be mentioned that the residents of this district generally cannot be trusted to give the names of the birds or fish correctly. To get correct information the fishing and sporting tribes, Jhabel, Kihál, Mor, and Mahtan must be consulted.

Government derives revenue from the fisheries, an account of which, and of the fishing industry, will be given further on.

35. The reptiles of the district are as follow. River-tortoises, which are eaten by the Kiháls, Mors, and Chúhrás, but not by other tribes. Among the sauria are—

1. The snub-nosed crocodile (*Crocodilus palustris*), here called baghún.
2. The fish-eating crocodile (*Gavialis gangeticus*), here called sinsár. The tribes before mentioned eat the flesh of these.
3. The goh.
4. The gulírá. This is said to be the young of the goh, but it seems to be a distinct species.
5. The sánhán, a lizard which frequents sandy grounds. The flesh is used in medicine and is credited with strengthening and restorative powers.
6. Kirari. The common house lizard.
7. Korh kirari. Literally the leprous lizard. It is said to change its colour and may be a kind of chameleon.
8. Khan is a black and white lizard with a bluish tinge. There are all sorts of fables about khans. It does not copulate, but is found full grown in the belly of snakes. It is supposed to be most deadly.

Jai kún kháwe khan
Ma na dekhe jan.

“He whom a khan bites is as sure to die as if his mother had never seen him born.”

It is really perfectly harmless.

9. Galei is larger than the house lizard, and is supposed to be harmless. If a woman touch a galei before she make butter, it will be abundant.

Frogs, the male called dedar and the female did, abound everywhere.

Snakes are very common. The following are the chief kinds:—

There are several varieties of cobras. The names depend on the colors. I give the native names of 12 varieties. It should be remem-

bered that bashyar, mushki, and kálá, all mean black. Chúhrá also means black, because sweepers (chúhrá) are black-complexioned.

1. Bashyar.
2. Mushki.
3. Kálá.
4. Mushki kálá.
5. Chúhrá.
6. Chúhrá mushki.
7. Mushki títará, or partridge black.
8. Mushkí tilyar, starling black.
9. Moti bind, literally pearl drops.
10. Mushki phanyar, the black-hooded, from Sanskrit phan, a snake's hood.
11. Pēti baggá, white-bellied.
12. Gal kálá, black-throated.

The natives say that these are all separate species. The bashyar that I have seen had no hood, and is therefore one of the Elapidae. All the other varieties that I have seen had hoods. The bashyar is believed to be the female of the mushki tilyar. Other poisonous kinds are the sangchúr, literally "throttler," also called guráhá. This is the *Ophiophagus elaps*. The korkind or kurandi also called jalebi; these three names denote the double coil in which it lies. It is also called kaphra and khar peti from the hardness of its skin. This is the *Echis carinato*.

The charohá, literally "washerman," is a harmless snake.

Other snakes not identified are padam, vais, do-muhán or the snake with a head at each end.

Tír mār or ghore dangan, udná or jatal; this is said to be a hairy snake. Salang vásak, also called sáhi pivná, the breath drinker, because it drinks the breath of sleeping persons. I have not seen the varieties last named, but give the names as given to me by residents of the district. Wonderful stories are told of some. The vais, for instance, ties the hind legs of buffaloes together with its coils as with a kicking strap and drinks their milk.

Insects.

The insects which force themselves on one's notice are—

Makri or locust.

Tiddi. A grass-hopper most destructive to young crops.

Dánwar. Spider.

Vathúhán. Scorpion.

Dembhún. Wasp, hornet.

Labáná. An earth cricket with formidable jaws that bites severely. Why it should be called Labáná, the name of a tribe of industrious Sikh colonists, is not clear.

Kankúil. Centipede.

Popat. Butterfly.

Bees, here called mákhi, produce good honey (mákhi) in September and October.

36. There are 12 miles of metalled and 524 of unmetalled roads in the district. The metalled roads are immediately near Muzaffargarh. The unmetalled roads are as follow :—

Communications,
Roads.

1. The road from the southern boundary of the Jhang District running parallel with the Chenab through Rangpúr, Muzaffargarh, Khángarh, Shahr Sultan, Alípur, Sítpur, and Dháká to the ferry on the bank of the Indus opposite Rájanpur in Dera Gházi Khan.
2. The old customs road from the Leiah boundary running parallel with the Indus through Daira Dín Panáh, Kot Adú, Sanánwán, Gujrat, Kureshí, and Kinjar. To complete this road parallel with the whole length of the district, a road from Kinjar to Dháká is urgently required.
3. The road from the bank of the Chenab at Rangpúr through Munda and the Thal to Daira Dín Panáh.
4. The road from the bank of the Chenab opposite Mooltan through Langar Sarai Bukhi which joins the old customs road at Kot Adú.
5. The road from Muzaffargarh through Mahmud Kot to Sanánwán with a branch from Mahmud Kot through Gujrát to the Kureshí ferry.
6. The road from the terminus of the Lahore Railway at the Shershalí ferry through Muzaffargarh and Kureshí to the ferry opposite Dera Gházi Khan.
7. The road from Muzaffargarh through Shahgarh to Kinjar.
8. The road from the bank of the Chenab opposite Shujabád through Khángarh and Kinjar to the bank of the Indus.
9. The road from the centre of No. 8 between Khángarh and Kinjar through Muhammadpur to the bank of the Chenab near Chitwáhán. This was part of the old customs road.
10. The road from Rohillánwáli to Jatoí.
11. The road from Shahr Sultan to Jatoí.
12. The road from Madwala on the bank of the Chenab to Jatoí. This was an earlier customs road.
13. The road from Alípur to Sítpur *via* Khairpur.
14. The road from Jatoí to Alípur.

37. There are 21 ferries on the Indus, all of which are under the control of the Deputy Commissioner of Dera Gházi Khan. There are 28 ferries on the Chenab. From the north-east corner of the district to Shershab, which is the terminus of the Sindh, Punjab and Delhi Railway, 7 ferries are under the control of the Deputy Commissioner, Mooltan. The Shershab ferry and 20 others down to the junction of the Chenab with the Indus are under the control of the Deputy Commissioner, Muzaffargarh.

38. There are no bridges over either river. The inland bridging is over the canals, and is on the whole complete. A few bridges are still wanting on the road from Sanánwán to Kínjar, and when the much required road is made from Kínjar to Jatói, several bridges will have to be made.

39. The district is well supplied with rest-houses. There are dâk bungalows at Muzaffargarh and Kureshí, and rest-houses at the following places :—

Rangpúr.	Khángárh.
Sámti.	Kínjar.
Langar Sarái.	Rohillánwáli.
Mundá.	Shahr Sultán.
Daíra Dín Panáh.	Jatói.
Kot Adú.	Alipur.
Sanáuwan.	Sítpur.
Mahmúd Kot.	Dháká.
Kureshí.	

A new rest-house is being made at Muhammadpur half-way between Khángárh and Rohillánwáli.

40. There are Sarais at the following places :—

Muzaffargarh
Kureshí
Sanánwán
Khángárh
Alipur
Bukhí
Mírwálá

41. The towns are small and unimportant, with the exception of Sítpur. They are all modern. The following are the principal :—

Name.	Population.
Daira Din Panah	... 1,792 *
Kot Adú	... 5,552 *
Mahmúd Kot	... 2,223 *
Gujrát	... 1,585 *
Rangpúr	... 1,439 *

NOTE. — * This includes a large rural population.

Muzaffargarh	...	2,596
Khángárh	...	2,778
Kúnjar	...	4,719 *
Shahr Sultán	...	1,947
Jatoí	...	1,914
Alípur	...	2,525
Khairpur	...	2,589
Sítpur	...	1,798

Sanánwán, the head-quarters of the tahsíl of that name, is merely a small village.

CHAPTER II.—HISTORY.

1. The Muzaffargarh District as a whole had no complete history until it was united under the sole rule of Diwán Sáwan Mal. The history of the neighbouring governments is, however, interesting, because it is by it alone that we learn the origin of the tribes now living in the district, and the order in which they occupied it. The contemporary history will, therefore, be given as briefly as possible, more for the sake of ready reference when the tribes are described, than in order to record events which had their central interest in this district.

2. From the earliest times this district followed the fortunes of the kingdom of Sindh. The Hindu dynasties of the Rais and of the Brahmans ruled over a Jat population who are a branch of the Kshatriya or Rájput race, and, for some reason not known, had been excluded from fellowship. These Rájputs, who may be called aboriginal, are the ancestors of the Jats who form two-thirds of the present population, and all the other tribes are subsequent arrivals.

3. The first Arab conquerors held Sindh and Mooltan from 711 A. D. to 750 A. D., when they were expelled by a Rájput tribe called Sumrá, whose representatives are still found in this district. In 1351 A. D. the Sumrás were expelled by the Summás, another Rájput tribe, descendants of whom are to be traced among the Unars of the Alípur Tahsíl. The Summá rulers all bore the title of Jám. To this day jám is used as a title of respect to Muhammadans who have a Sindhian origin. It was during the rule of these Rájput tribes in Sindh and Mooltan, that an immigration of Rájputs from Hindustan took place. It is to this that we owe the presence in the district of such tribes as the Siáls, Guráhás, Bhattís, and Chhajráas.

NOTE.—* This includes a large rural population.

4. The next event bearing on the history of this district is the establishment of the Langá dynasty in Mooltan. It ruled from 1445 A. D. to 1526 A. D. There are still Langás in this district, and it was during the Langá rule that the independent kingdom of Sítpur was established by the Nahars in what is now the Alípur Tahsíl. It was during this dynasty that the Bilúches first emerged from the Sulemán mountains and occupied the country on the left bank of the Indus.

5. The establishment of the independent kingdom of Sítpur is the starting-point of a connected history of the district. Henceforward the district is occupied by four governments. In the southern angle will be found the government of Sítpur held first by the Nahar family, then by the Makhdúm of Sítpur, and lastly by the Nawábs of Baháwalpur. The west, central part of the district opposite Dera Gházi Khan, was governed by the rulers of Dera Gházi Khan, first, Mirhání Biluches, then Gujars and Kalhoras, then by various governors directly appointed by the Durani kings of Kabul, and finally by the Nawábs of Baháwalpur. The east, central, and northern part of the district lying on the right bank of the Chenab opposite Mooltan was nominally ruled by the Mooltan governors. The northern part of the district including the Thal, after passing through a stage of anarchy, became subject to the Governors of Mankera who were locally known as Nawábs of the Thal.

6. The dynasty that established the Sítpur kingdom was the Nahar. In 1450 A. D. (854 A. H.) when Behlúl Khán Lodi who had been governor of Mooltan became king of Delhi, he granted the country lying between the Indus * and the Sulemán range, south of a line drawn from Harand to Uchh and north of Shikarpur in Sindh, to his relation Islám Khán Lodi. This tract comprised what is now the south part of the Alípur Tahsíl of this district, the southern part of Dera Gházi Khan District, and the northern part of Sindh. Islám Khán or his descendants took the title of Nahar. Islám Khán's grandsons, Kásim Khán, Salám Khán, and Tahir Khán quarrelled and divided the country among themselves. The south part of the present Alípur Tahsíl, the chief town of which was then Sítpur, fell to Tahir Khán. He established his rule there and died. From the establishment of the Nahar family to the present, 26 generations have occurred. The last of them is Bakhshán Khán, who is jamadar of chaprasís in the Alípur Tahsíl, and who enjoys a small allowance from Government for looking after the family tombs. One of the Nahars built a fine tomb in his lifetime which still exists. His name was Tahir Khán, named Sakhi, or the liberal. Another, named Alí Khán, founded Alípur. No other memorial of the Nabars exists. At the end of the fifteenth century the Bilúches began to issue from the hills, and occupied the country on the left bank of the Indus, from Sítpur to Kot Karor in Leia. In 1484 A. D. (887 A. H.) Haji Khán, a Mirhani Bilúch, founded Dera Gházi Khan and established a

* NOTE.—It must be remembered that at this time the Indus met the Chenab near Uchh.

dynasty, the rulers of which alternately bore the titles of Hájí Khán and Gházi Khán.* These chiefs expelled the Nahar from the south of the Dera Gházi Khan District and pressed the Sítpur Nahar very hard. Treachery was at work at the very door of the Nahar. Sheikh Rájú, Makhdúm of Sítpur, who was a counsellor of the Nahar, began to seize the country for himself. He did not entirely expel the Nahars, for when he in his turn was overthrown by the Nawábs of Baháwalpur, parts of the country were still in possession of the Nahar. The greater part, however, of the south of the district was governed by the Makhdúms in Sítpur. Until the inroads of Baháwalpur began, we hear nothing of the Nahar or of the Makhdúm's government. The Nahars appear to have been indifferent rulers. They left no public works behind them, except Tahir Khán's tomb, and in this rainless and flooded country it is the criterion of a good governor that he should make canals and protective embankments. The title of Nahar was given to them for their rapacity. Popular stories attest their want of wisdom. One winter's night the jackals were howling round Sítpur. Tahir Khán "the liberal" asked his Wazír what made them howl. The Wazír answered "the cold." The Nahar ordered clothes to be made for them. Next night the jackals howled again, and the Nahar asked his Wazír what they were howling for. The Wazír replied "they are invoking blessings on you for your liberality." The Makhdúms of Sítpur, on the contrary, were good governors. They dug canals, extended cultivation, and one of them founded the town of Rájanpur in the Dera Gházi Khan District.

7. The divided and weakened state of Sítpur attracted the attention

The Nawábs of Baháwalpur take Sítpur. of the Nawábs of Baháwalpur first at the beginning of the eighteenth century. They ruled over the greater part of the district for a hundred years, and left their mark on it by their public works, and by introducing an organised revenue administration. The founder of the State of Baháwalpur was Sadik Muhammad Khán, son of Mullan Mubarak Khán, a distinguished resident of Shikarpur in Sindh. For some reason not ascertained, Sadik Muhammad Khán had to flee from the enmity of Nur Muhammad Kalhora, first of the Kalhora governors of Sindh. Sadik Muhammad Khán left Shikarpur in 1727 A. D. (1140 A. H.) and passed with his family and a body of followers through the Muzaffargarh District to Bet Dabli on the borders of Leiah. He was closely followed by the Sindh troops under Mir Shah Dad Khán. A skirmish took place, in which the Sindhians were defeated. Then Sadik Muhammad Khán took refuge with the Makhdúms of Uchh, who sent him to Hayat Ullah Khán, Governor of Mooltan, with their recommendations. Hayat Ullah Khán granted him the district of Chowdhry south of the Sutlej in jagir. Sadik Muhammad Khán distinguished himself as an extender of cultivation, and a suppressor of robbers. His next promotion was the grant of the town and country of Farid, a robber chief whom he defeated and killed with his followers. In 1739 A. D. (1152 A. H.) Sadik Muhammad Khán obtained the title of Nawáb from Nadir Shah, and in the anarchy following the invasion of

* NOTE.—The village in which Dera Gházi Khan stands is hence known as Hájí Gházi.

Nadir Shah, he succeeded in seizing the country bounded by the Sutlej on the north, Bikanir on the east, Sindh on the south, and the Indus on the west. Sadik Muhammad Khan was succeeded by his son Bahawal Khan, who founded the town of Bahawalpur, and who is known as Bahawal Khan "the great." It was in the time of his successor, Mubarak Khan, that the Nawabs of Bahawalpur first established themselves permanently in this district. In 1751 A. D. (1164 A. H.) Mubarak Khan seized the country about Madwala, now a large village on the right bank of the Chenab between Shahr Sultan and Alipur, just opposite the junction of the Sutlej and Chenab, from the Nahars, and in the same years he took Bet Doma, a village and tract south of Sitpur, from Makhdum Sheikh Raju of Sitpur. Bahawal Khan II was the next Nawab. In 1781 A. D. (1194 A. H.) he took the parganah of Jatoi from Makhdum Sheikh Raju of Sitpur. The native histories say that he took it on farm, but this is hardly credible. The Nawab was the most powerful, and the Makhdums were growing every day weaker. The Nawab had already taken part of the Makhdums' country by force and was shortly to take the rest. It was about 1790 that the Indus left its old course which joined the Chenab close to Uchh, and took the bed it now occupies. The south of the district was thus laid open to the attacks of Bahawalpur, and the Nawab at once availed himself of the opportunity. He took without a contest Alipur, Shahr Sultan, Sitpur, and Khairpur, in short the remainder of the Alipur Tahsil from the Nahars and the Makhdums of Sitpur. He also proceeded to take the whole of the western and southern portion of the Muzaffargarh Tahsil from the rulers of Dera Ghazi Khan, but we will leave him in possession of the Alipur Tahsil for the present, and give an account of the remaining governments that existed in this district.

8. It has already been stated that the Biluches occupied the left bank of the Indus at the end of the fifteenth century, and that in 1484 A. D. Haji Khan founded Dera Ghazi Khan. His son was Ghazi Khan, and alternate Haji Khans and Ghazi Khans ruled until 1769 A. D. (1183 A. H.) As far as this district knows them, they were good governors. They encouraged agriculture and excavated canals. One of them, said to be the first Ghazi Khan, founded the town of Kinjar on the bank of the Indus. Mahmud Gajar was the son of one Yusaf. He became Wazir to the last Ghazi Khan, and, under the pretext of saving the government from conspirators, called in Ghulam Shah Kalhora, Governor of Sindh, who took Dera Ghazi Khan, arrested the last Ghazi Khan, and carried him a prisoner to Sindh, where he died. Ghulam Shah left Mahmud Gajar as Governor of Dera Ghazi Khan. He was maintained by the kings of Khurasan and received from them Nawabship and the title of Jan Nisar Khan. Mahmud Gajar ruled for 30 years, and was succeeded by his nephew Barkhurdar, who was superseded by governors sent direct from Khurasan. Mahmud Gajar has a great reputation as a good governor in this district. He bought much land which Government owns to this day. He built the fort of Mahmud Kot. The Shia Muhammadans in this district date from the time of the Kalhora invasion caused by Mahmud Gajar. After the

The second Government,
Dera Ghazi Khan.

Cújars, a number of governors were sent direct from Khurasán. Anarchy prevailed on the left bank of the Indus, which prepared the country for the invasion of Baháwal Khán II in 1791. Here we may leave the Dera Gházi Khan part of Muzaffargarh at the same point where we left Sítpur, and give an account of the part of the district that was subject to Mooltan.

9. The Langás referred to in para. 4 were expelled in 1526 A. D.

The third Government, Mooltan, by the Arghúns nominally acting on behalf of Baber, and in Akbar's reign, Mooltan was incorporated in the Delhi empire as a Súbah or province. Of the sub-divisions of the Mooltan province, the only two mentioned in the Ain Akbari are Rangpúr and Sítpur. Though we know from general history that this district must have been sometimes subject to Delhi and sometimes to Khurasán, neither monarchy had much effect on its internal history, and the local chiefs carried on their public improvements and their little wars without interference from head-quarters. Occasionally, one of two rival competitors tried to strengthen his cause by obtaining a deed of grant from Delhi or Kabul. But a strong band of followers proved a better support than any sanád or firmán. A favorite saying of the local historians in describing the rise of some chief who, if a settled government had existed, would have been hung, is—

Uthar Dilhi dí Sáltanat men fatár ;
Idhar Sháhán Kábul ke nazaron se dár.
On that side anarchy in the Delhi kingdom ;
On this side far from the eyes of the Kings of Kabul.

I have, therefore, as far as possible avoided all notice of the nominally central governments and only mentioned extraneous history as far as it bears on the district. On this principle, Mooltan has no history connected with the district from the time of the Langás to the establishment of the Mooltaní Patháns, as they were called. These were a family of Saddozai Afghans and a branch of the family to which Ahmad Shah, Taimúr Shah, Zamán Shah, and Shah Shujah, kings of Kabul, belonged. The first of the family who came to India was Husain Khán, who held Rangpúr in this district in jagir in the time of Aurangzéb. Záhíd Khán was the first of the family who became Nawáb of Mooltan. This was in 1738 A. D. Between the accession of Záhíd Khán and that of his son Shuja Khán, simple anarchy prevailed. Shuja Khán was invested with the government of Mooltan in 1767 A. D. He founded Shujabad in the Mooltan District opposite Khángarh. In his time the Bhangi Sikhs overran the country and occupied Mooltan, driving Shuja Khán to Shujabad. To this day the raids and cruelty of the Bhangi Sikhs live in the memory of the peasants living along the right bank of the Chenab. Shuja Khán was succeeded by his son Muzaffar Khán, but did not recover Mooltan till 1779 A. D., when he was reinstated by Taimúr Shah, king of Kabul, who expelled the Sikhs and appointed Muzaffar Khán, governor, with the title of Nawáb. Muzaffar Khán governed Mooltan till 1818 A. D., when Mooltan was besieged and taken by the Sikhs, and the Nawáb with five of his sons was killed. Muzaffar Khán's rule

was a continued war. It is, however, only as a civil governor that we have to do with him, and it is surprising that he should have found time for making such improvements in the country on the right bank of the Chenab. The country in this district attached to Mooltan, included the talukas of Rangpúr, Murádábád, Muzaffargarh, Khángarh and Ghazanfargarh. Muzaffar Khán dug canals, made embankments and extended cultivation. He established many persons of his own tribe in this part, a fact to be remembered when we come to relate the tenure of the Mooltaní Patháns. In 1794 A. D. he founded the fort and town of Muzaffargarh. His sister Khan Bibí built the fort and town of Khángarh, and his brother Ghazanfar Khán, the fort and town of Ghazanfargarh.

10. The governors that occupied the north of the district including the greater part of what is now the
 The fourth Government. Sanánwán Tahsíl, were first Mirhání Bilúches.
 The Thal Nawábs. Adu Khán, a son of one of the Gházi Kháns, is
 said to have founded Kot Adú. When the fortunes of the Gházi Kháns became low, Mahmúd Gájjar succeeded as before related and built the fort of Mahmúd Kot to maintain his authority in the Gházi Khán tracts on the left bank of the Indus. Next, a family of Jaskání Bilúches ruled the north of the district. Then follows an interval during which the Kalhoras of Sindh ruled, their Chief being Abdul Nabbí. He became unpopular on account of his tyranny, and objectionable to the Kabul king because he did not pay the revenue. Muzaffar Khán, Nawáb of Mooltan, was sent to coerce him. Muhammad Khán Bahádar Khel officiated for Muzaffar Khán at Mooltan, and on his return was appointed Nawáb of Mankera and the Thal. Before he obtained possession he had to fight a battle with Abdul Nabbí at Leiah, in which the latter was defeated and his son Muhammad Arif killed. This was in 1792 A. D. Muhammad Khán Bahádar Khel has left his mark on the north of the district by the canals which he dug. He appears to have been a good ruler, and, though his name is forgotten, it is he that is referred to as the Nawáb of the Thal. He died in 1815 A. D., leaving a daughter who was married to Háfiz Ahmad Khán. Their son, Sher Muhammad Khán, succeeded to the Nawábship under the guardianship of his father. In 1820 Ranjit Singh took Mankera and drove the Nawáb to Dera Ismail Khán, of which his descendant is now titular Nawáb. The country under the Thal Nawábs was known as Kachhí Shamálí, opposed to Kachhí Janúbí, which was Baháwal Khán's dominion. That the word Kachhí, which means land subject to river-action, should ever have been applied to the Thal, strongly corroborates the tradition that the Indus at one time flowed down the Thal mentioned in the chapter on physical geography. At present it is hard to imagine anything less like a Kachhí than the Thal is.

11. We have now brought our four governments to the point where they begin to fall and to become united under one head. The process was completed in the thirty years between 1790 and 1820 A. D.
 Union of the four Governments.
 We left Baháwal Khán II, with the district lying open to him by the shifting of the Indus to the west and having just seized those

talukas which now form the Alípur Tahsíl. In the part of the district which had been ruled from Dera Gházi Khán there prevailed the anarchy which followed the rule of Mahmúd Gújar. Between 1790 A. D. and the end of the century Baháwal Khán II took possession of the talukas of Aráin Kínjar, Khor, Mahrá, Seri and Trund, which now form the southern and western part of the Muzaffargarh Tahsíl. This country and the Alípur Tahsíl were called Kachhí Janúbí, opposed to the Kachhí Shamálí of the Thal Nawábs. He and his successor, Sadik Khán II, and Baháwal Khán III brought the country under a settled government, encouraged cultivation and excavated canals. The dates of their accessions and deaths are not on record until we come to Baháwal Khán III, who was the governor that helped Edwardes at the siege of Mooltan. He died in 1852 A. D. In 1818 A. D. the Sikhs took Mooltan, and the talukas formerly governed by Muzaffar Khán, *viz.*, Rangpúr, Murádábád, Muzaffargarh, Khángarh and Ghazanfargarh, were henceforward administered by the Sikh governors of Mooltan. In 1819 the Sikhs took Dera Gházi Khán, but Baháwal Khán remained in possession of his conquests. In 1820 the Sikhs took Mankera, from which the north of this district was governed. Baháwal Khán submitted to the Sikhs, and thus the whole district became united under the rule of Ranjit Singh. A re-distribution then took place. Baháwal Khán was confirmed in his conquests, which were farmed to him for a sum, the amount of which, as every historian, native and European, gives it differently, had better be omitted. The northern part of the district continued to be governed from Mankera, and Muzaffar Khán's talukas were governed from Mooltan. The Mooltaní Patháns fled the country, and went for the most part to Dera Ismail Khán, not to return until the English came in 1849 A. D. In 1822 the celebrated Sáwan Mal, who was peshkar to the governor of Mooltan, Bhaya Badan Hazari, fell out with his superior officer, and the talukas of Muzaffargarh, Murádábád and Ghazanfargarh were given to him by Ranjit Singh in farm. Baháwal Khán failed to pay the sum for which his country was farmed to him. General Ventura was sent from Lahore with an army, and drove the Baháwalpurians out of the district and across the Chenab, which has since formed the boundary between this district and Baháwalpur. How the north of the district joined Mooltan I cannot find out; but in 1829 the whole of the present district of Muzaffargarh was united under Diwán Sáwan Mal, governor of Mooltan.

12. Though under the Baháwalpur Nawábs part of the district has enjoyed a fairly settled administration, Sáwan Mal's government was better than anything that had preceded it. Its sole object was the accumulation of wealth for the Diwán. The execution of public works, the administration of justice and security of life and property, were a secondary consideration, and were insisted on only because without them agriculture would not prosper, and the revenue would not be paid. When one examines his numerous cesses and sees how he levied dues to pay the people's alms and perform their religious duties, and then paid the poor and the Brahmans what he thought a fair amount and pocketed the rest; how he levied a cess in return for keeping his

word, and how he encouraged his officials to take bribes and then made them duly credit the amount in the public accounts,—one's admiration for the great Diwán is less than it would be, if based on history. The district was divided into the 24 talukas mentioned in the margin and which are shown in the talukawár map accompanying this report. Each taluka was governed by a kárdár, a muharir, and a few soldiers. A better account of how the government was carried on cannot be given than by translating a specimen of the instructions given to a kárdár—

1. "Treat the subjects well. Work in extending cultivation. Collect the revenue with acuteness. Every harvest and every year let cultivation and the revenue increase.
2. "Protect the taluka effectually. Let not theft and wickedness occur. If a theft takes place, before all things cause restitution to be made to the complainant, search for the thief, imprison him, and after two months send the list of thieves to me for suitable orders of imprisonment or fine.
3. "Send the revenue punctually in the following instalments:
"Kharif, 1st instalment 15th Magar,
 2nd instalment 15th Poh,
 3rd instalment 15th Maugh,
"Rabbi. 1st instalment 15th Jeth,
 2nd instalment 15th Harh,
 3rd instalment 15th Sáwan.
4. "On Harh 1st, send a list of the current prices, signed by honorable panches and zamindárs.
5. "Every year in the month of Badra come to my office and settle your accounts.
6. "Settle cases of the hither and farther bank of the Ghará by means of letters to the vakils stationed at Ahmadpúr and Baháwalpur, and to the kárdárs of that state, with politeness, and secure your object.
7. "Perform the clearance and excavation of the canals in time, that the irrigators may not have to wait, and that time may not pass.
8. "When you go to appraise or divide crops, or to assess revenue, make the papers of the muharir, dumbír and panch agree. Let there not be discrepancy.
9. "Act according to the before mentioned provisions of this áin. Let there be no difference from it. Subsist on your pay. Covet not from any one, and rest your hopes on no one, nor let your muharirs do so. If you do, you are strictly responsible.
10. "Pay the soldiers with your own hands according to the fixed scale, and deduct whatever deductions are due from them."
11. Here are entered the names and pay of the kárdár, muharir and other servants,

In spite of the warning against extortion, the kárdárs were allowed to receive nazaránás and subsistence allowance when they went on government duty, such as measuring crops. The subsistence was on the following scale; flour 3 sérs, ghí $\frac{1}{2}$ sér, dal $\frac{1}{2}$ sér, gram for horse 3 sérs, spices 1 anna. Nazaránás had to be paid in to government. There were five grades of kárdárs who received from Rs. 15 to Rs. 60 per month, and five grades of muharirs receiving from Rs. 8 to Rs. 20 per month. Soldiers were divided into the war and revenue departments. A sowar in the war department received Rs. 15 to Rs. 20, and in the revenue department Rs. 12 a month. Foot soldiers in the war department received Rs. 7 and Rs. 6, and in the revenue department Rs. 3 and Rs. 5. There are few personal details of Sáwan Mal's government which relate to this district. How he excavated and improved canals has been already told. How he created or extended the tenure called chakdári will be described among the tenures, and his revenue system will be described in its proper place. During the rule of Sáwan Mal a large number of Labáná colonists from the Punjab settled here. There are now more Labánás in Muzaffargarh District than in the other districts of the Mooltan and Derajat Divisions put together.

13. Sáwan Mal died on the 29th September 1844, and was succeeded

Diwán Mulráj.

by his son Mulráj, of whom nothing particular connected with this district is known. When

Mulráj broke into rebellion, Lieutenant Edwardes' troops passed through this district from Kureshí ferry on the Indus across the Chenab, just before the battle of Kineyree. Before Edwardes marched through this district, while Mulráj's troops under Har Bhagwán Singh occupied Dairá Dín Panah, Kot Adú and Kureshí, the zamindárs of Jatoí had robbed Parabh Dál, the kárdár of Jatoí, and made him over to the servants of the Nawáb of Baháwalpur. A force of 200 men under Jowáhir Mal, Emina-bádí, was sent from Kureshí to punish the people of Jatoí. The Baháwalpur troops, 1,500 in number under Muizuddin Khán Khákwani, crossed the Chenab and met Jowáhir Mal at Alípur. Jowáhir Mal, seeing himself outnumbered, fled. The Baháwalpur troops killed a hundred of his soldiers and pursued Jowáhir Mal nearly to Khángarh, where he found a refuge.

14. In April or May 1849 the British districts of Khángarh and

The district under British rule.

Leiah were formed. Khángarh contained the present tahsils of Muzaffargarh, and Alípur, and the talukas of Garh Maharájá and Ahmadpur,

which are now in Jhang. Khángarh was first named as the head-quarters of the district, but before the end of 1849 it was removed to Muzaffargarh. Khángarh contained four tahsils—Rangpúr, Khángarh with its head-quarters at Muzaffargarh, Kinjar and Sítpur. What is now the Sanánwán Tahsíl was in the Leiah District, and had its head-quarters at Kot Adú. In 1859 the Sanánwán Tahsíl was separated from Leiah and added to this district, and the district took the name of Muzaffargarh and was attached to the Mooltan Division. It was in 1861 that the district took its present shape. The Rangpúr Tahsíl was abolished. The talukas of Garh Maharájá and Ahmadpur were joined

to Jhang, and the rest of the tahsil was attached to Muzaffargarh Tahsil. The Kinjar Tahsil was abolished and its talukas added to Muzaffargarh. With the exception of these territorial transfers, the district has no events of interest other than those connected with ordinary district management since annexation. In 1857 a body of mutineers from Mooltan were defeated by the zamindárs under Allah Dad Khán of Khángarh, but the mutiny left no other sign. The Deputy Commissioner reported that there was not a single mutineer in Muzaffargarh Jail when the amnesty was proclaimed, and that no buildings were destroyed during the mutiny. Of the famine of 1861 the Deputy Commissioner writes: "Fortunately did not reach here," but numberless people flocked here from Hindustan in search of food, and famine works had to be started. The only colonists who were introduced during British rule were the Mooltání Pátháns who returned and partly recovered the lands from which they had been expelled in 1818 A. D. by the Sikhs. The following is a list of the Deputy Commissioners who have administered the district since annexation :—

Years.	Names of Deputy Commissioners.	DATE OF CHARGE.	
		Received.	Made over.
1849	Mr. Wedderburn		
	Mr. J. H. Prinsep		
	Lieut. James		
1850-57	Lieut. Farrington		
	Capt. Voyle		
	Lieut. McNeile		
	Lieut. Tighe		
	Capt. Bristow		
1858	Mr. Henderson		
1859	Capt. Bristow		
	Capt. Maxwell		
1860	Lieut. Tighe		
1861	Capt. J. S. Tighe	1st Jan. '61	31st July '61
	Capt. T. F. Forster	1st Aug. '61	31st Oct. '61
	Capt. J. S. Tighe	1st Nov. '61	31st July '62
1862-65	Capt. H. J. Hawes	1st Aug. '62	24th Oct. '65
	Mr. R. G. Melvill	25th Oct. '65	24th Dec. '65
1866	Major H. J. Hawes	25th Dec. '65	8th Apl. '66
	Capt. R. G. Melvill	9th Apl. '66	16th Dec. '66
1867-68	Major H. J. Hawes	17th Dec. '66	2nd May '68
	Capt. Armstrong	3rd May '68	14th June '68
1869	Capt. J. Fendall	15th June '68	30th Apl. '69
	Mr. G. E. Wakefield	1st May '69	31st Oct. '69
1870	Capt. J. Fendall	1st Nov. '69	28th July '70
	Mr. M. Macauliffe	29th July '70	7th Sept. '70
1871	Capt. J. Fendall	8th Sept. '70	27th May '71
	Capt. F. J. Miller	28th May '71	9th June '71
1872	Mr. F. D. Bullock	10th June '71	9th Feb. '72
	Lieut. F. J. Miller	10th Feb. '72	22nd Mar. '72
1873-75	Mr. J. D. Tremlette	23rd Mar. '72	16th Aug. '75
1875	Mr. F. E. Moore	17th Aug. '75	5th Nov. '75
1876	Mr. J. D. Tremlette	6th Nov. '75	3rd June '76
	Mr. D. B. Sinclair	4th June '76	3rd July '76
1877	Mr. J. D. Tremlette	4th July '76	8th Mar. '77
1878	Major F. D. Harrington	9th Mar. '77	8th Dec. '78
1879	Mr. M. Macauliffe	9th Dec. '78	9th May '79
	Mr. Edward O'Brien	10th May '79	26th Oct. '79
1880	Mr. M. Macauliffe	27th Oct. '79	7th Mar. '80
	Mr. Edward O'Brien	8th Mar. '80	

CHAPTER III.—POPULATION, HOUSES, FOOD AND CLOTHING.

1. According to the census of 1868 the population was 295,547. As regards density of population the district ranked twenty-second out of the thirty-two districts of the Punjab, having ninety-eight persons to the square mile. Grouped according to religion, the population consisted of—

Christians	...	30
Muhammadans	...	249,865
Hindus	...	36,746
Sikhs	...	2,571
Budhists and Jains	...	2
Others	...	6,383

The chief tribes and their numbers were as follows :—

Muhammadans.

Jats	...	158,952
Bilúches	...	41,737
Rájputs	...	78,330
Syads	...	7,180
Patháns	...	1,868
Others	...	32,396

Hindus and Sikhs.

Aroras	...	31,308
Labanas	...	2,476
Brahmans	...	1,360
Khattris	...	843
Others	...	3,330

2. In this district the word Jat includes that congeries of Muhammadan tribes which are not Syads, Bilúches, Patháns and Kureshis. According to this definition Jats would include Rájputs. This I believe is correct. The Jats have always been recruited from the Rájputs. There is not a Jat in the district who has any knowledge, real or fancied, of his ancestors that would not say that he was once a Rájput. Certain Jat tribes as the Panwár, Parihár, Chhajrá, Dahá, Guráhá, Bhattí, Massan, Bhuttá, Sahú, Siál, Jánglá, and others have names and traditions which seem to connect them more closely with Hindustan. Some bear the Rájput title of Rai, and others, as the Saigals and Khairás, though Muhammadans, associate a Brahman with the Mullán at marriage ceremonies, while the Panwárs, Parihárs, Bhattis, Joiyás, and others bear the names of well-known tribes of Rájputáná. The fact is that it is impossible to define between Jats and Mussalman Rájputs. And the difficulty is rendered greater by the word Jat, also meaning an agriculturist, irrespective of his race and Jatáki agriculture. In conversation about agriculture I have been referred to a Syad Zaildár with the remark, "Ask Anwar Shah; he is a better Jat than we are."

The Jat tribes are exceedingly numerous. There are 165 in the Sanánwán Tahsíl alone. They have no large divisions embracing several small divisions. Nor do they trace their origin to a common stock. No tribe is pre-eminent in birth or caste. Generally Jats marry into their own tribe, but they have no hesitation in marrying into other tribes. They give their daughters freely to Bilúches in marriage. But the Bilúches say that they do not give their daughters to Jats. This is, however, a Bilúch story; many instances of Jats married to Bilúchis could be named.

The best known Jat tribes are the following:—

On the right bank of the Chenab are settled the Khairás Siáls, with their branch the Surbánás, the Traggars, Thaíms and Chhajrás. In the Sánanwán Tahsíl are Parihárs, Panwárs, Guráhás and Pattals. In the centre of the district are Metlas, Makwals, Bhuttas, Diwálas, Mahrás, and near Kínjar the Dhanotr and Jánglá tribes abound. On the bank of the Indus, and in the south of the district, the Bilúches become more numerous, and the majority of the Jats have a Sindhí origin shown by their bearing the title of Jám. Of these Sindhí Jats, are the Damar, Unár and Sarkí tribes. The leading men among the Jats are Jallá and Shajáwal of the Traggar tribe near Rangpúr, Sáhib Khán Siál, Muhammad Yár Thaím near Muzaffargarh, Ghulám Haider Jánglá of Kínjar, Pír Muhammad and Umarvadá Chhajrás, Ahmad Yár Damar, Jam Massú Unar, Fázil Muhammad Panúhán, Ahmad Yár Hinjrá, Sáliḥ Muhammad Parihár, and Mián Jivan Guraha.

3. The Bilúches differ little from the Jats with whom they have
 The Bilúches. freely intermarried and mixed, and with whom they live. The tribes are numerous, but have no arrangement into Tumaus and Phallis like the Bilúches on the frontier. No tribe is pre-eminent on account of descent. The only common bond is the name Bilúch. In the south of the district, the distinctive Bilúch dress of a smock-frock reaching to the heels may occasionally be seen, especially among the Dríshaks, but as a rule a Bilúch cannot be distinguished from a Jat. In this district they cannot even boast that they excel in the standard Bilúch virtues of hospitality, want of industry, and robbery. Certain tribes, as the Surbánás, Ghazlánís, Gopángs and Chándías have the worst of characters, but they are no worse than the neighbouring Jats. None understand the Bilúch language. Bilúches are found generally throughout the district, but are more numerous on the bank of the Indus, and in the south. Their chief tribes are the Chándías, the Gurmánís (among whom Mián Mahbúb, Honorary Magistrate, is a leading man), the Gopángs, the Jatóis (among whom Kaurá Khán is the wealthiest), the Laghárís, Mastóis and Dríshaks.

4. The Syads are chiefly Bukhárís and Gilánís. There are other
 Syads. less known divisions as the Husaini, Maúdudi and Shamsi. Historically, the best known is the Syad family of the Makhdúm of Sítpur, for sanctity Diwán Muhammad Ghous, the keeper of the shrine of Alampir at Shahr

Saltán. Both these are Bokhári Syads. Muhammad Shah, guardian of the shrine of Pír Amír in the village of Jálwála, is a Gíláuí Syad. The tribe of Kaherí in the Sanánwán Tahsíl prefer to be Syads and call themselves Shah, but their claim is not generally admitted. They are very good cultivators, which gives a blow to their pretensions, for the Syads here are more noted for rapacity than industry. It should be mentioned here that the keepers of shrines, whether Syads, Kureshí or other tribes, are styled Makhdúm.

5. The Pathans came to this district, as already described, at the end of last and beginning of this century. Their present representatives are of the Alízai, Bábar, Tarín, Bádozai, Bánizai and Yúsafzai tribes. The members of the family of Nawáb Foujdar Khán, C.S.I., and Nawáb Hasan Khán, C.S.I., of the Alízai tribe are jagirdars and owners of Lálpúr in Muzaffargarh Tahsíl, but they live at Dera Ismail Khán. The Bábars own most land. Their chief representatives are Allah Dád Khán, Honorary Magistrate of Khángarh, Mahmúd Khán, and Ghulám Nablí Khán of Khángan. The Taríns live in the Sanánwán Tahsíl at Kuháwar. The only Taríns of note are Lál Khán and his brother Shah Nawáz Khán. None of the other Patháns are remarkable.

6. Of the other Muhammadan tribes, the only ones worth mentioning are the Jhabels, Kihals, Mors and Kutánás. The Jhabels came originally from Sindh. They cannot tell how long ago, but it is remarkable that of all the tribes of the district they alone speak pure Sindhí. They are also addressed by the honorific title of Jáñ. They live mainly by fishing and gathering pabbans, but many have taken to agriculture. They are reckoned good Muhammadans. The Kihals and Mors are said to be one tribe. In the north of the district they are called Mor, eat crocodiles and tortoises, and no Muhammadan will associate with them. In the south they do not eat these reptiles, and are considered good Muhammadans. Kihals and Mors live by fishing, but some have taken to agriculture. They, as well as the Jhabels, are fond of cultivating samúká, a grain that is sown in the mud left by the retreating rivers. These tribes live separately in villages near the rivers called Miání, from Me, a fisherman. There is an old report in the Deputy Commissioner's office which says that these three tribes were cannibals, but modern observation does not confirm this.

7. The tribe Kutáná are said to be Chúhrás converted to Islam. The derivation of the name Kutáná is not known. In vernacular it is spelt Kurtáná and pronounced Kutáná. They live by cutting reeds and grass, and by making thatched roofs, ropes, reed huts, and other reed-work. On account of their willingness, Kutánás are sought after as servants, and become chowkidars, village kotwáls, servants, and even cooks.

8. The Kureshís, though numerically small, deserve notice on account of their sanctity and present influence and wealth. The Kureshí family, which now

owns land near Karím Dád Kureshí and Gujrát, say that they received their lands from a king of Delhi. Their ancestors were counsellors and servants of the Dera Gházi Khán and Baháwalpur Nawábs and of Sáwan Mal. Sheikh Haidar, Zaildár of Kureshí, is the present representative of the family. Another Kureshí family owns Thatah Kureshí and the neighbourhood on the bank of Chenab between Muzaffargarh and Khángerh. The present representatives are Muhammad Baksh, Zaildar, and Núr Muhammad. They own much land, and are well off. The Kureshís of Sheikh Umar in the Sanánwán Tahsíl are large land-owners and rich. Their representatives are Ghulám Nabbí and Pír Baksh.

9. Of the Hindus the Kirár tribe are the most remarkable. They also style themselves Aroras. They claim to have been Khshatrís who became outcasts during Pars Rám's persecution of the Khshatrís. The ancestors of the present Kirárs fled to Kirát Prustha. Kirárs are divided into three main tribes—

Uttarádhi.
Dakhaná.
Dahrá.

The Uttarádhís and Dakhanás say that they were so named because they fled from Pars Ram to the north and south respectively. The origin of the name Dahrá is not known. Each main tribe is divided into numerous sub-divisions, the nomenclature of which defies classification. A few sub-divisions such as the Mate and Gurúwára are found in the three main tribes. In Alipur the Malotrá are found only in the Dakhaná and Dahrá tribes, and the Sachdev is found only in the Uttarádhí tribes. The Kantror is found only in the Uttarádhí. In three towns that I have examined the following was the result:—

In Kot Adú there were—

Uttarádhís	33	Sub-divisions.
Dakhanás	85	do.
Dahrás	None.	

In Kínjhar there were—

Uttarádhís	27	Sub-divisions.
Dakhanás	38	do.
Dahrás	13	do.

In Alipur there were—

Uttarádhís	27	Sub-divisions.
Dakhanás	75	do.
Dahrás	19	do.

The inquiry was incomplete, because it ought to have extended over a much larger number of towns. All it points to is that there are more sub-divisions of Dakhanás than of the other tribes in the district. The

sub-divisions of each tribe intermarry, but the tribes do not intermarry. Uttarádhi Cháolas will not marry Dakhaná Cháolas or Dahrá Cháolás and *vice versa*. In religion they worship the Krishna incarnation, or the river, or both, and their legends point to a revival of Hinduism having taken place in these parts between three and four hundred years ago by spiritual guides named Shámjī and Láljī being sent from Bindrában to bring back the Hindus who had begun to err and to worship at Muhammadan shrines. In 1600 Sambat came Shámjī from Bindrában. His guru gave him two idols and said: "The Hindus of the western country of the Sindh are ignorant of their religion. They have no guru to guide them between good and bad. Go to the west and teach the Hindus the ceremonies of their religion; make them your disciples (Sevak). Your words will have speedy effect. Remain not in the pursuit of worldly affairs." When Shámjī reached the Sindh, he made two and-a-half disciples, viz., two Khatris* and half a Chandia Bilúch! He established a mandar at Dera Gházi Khán, and there are now mandars of Shámjī at Dera Ismail Khán, Kot Sultan, Kot Adú, and Mooltan. Láljī was a worshipper of Krishna who sent him on an errand similar to Shámjī. He first declined to go. Krishna gave him an idol of himself and told him to start for the Indus, and that Láljī would know it was following by the tinkle of the jhanjars on the idol's feet. When Láljī reached the country west of Dera Gházi Khán he stopped and looked round. The idol said: "You have stopped, I am going no further." Láljī stopped and built a mandar to Krishna by the name of Sri Gopináthjī, which exists to this day. Other Láljī shrines are at Dera Ismail Khán called Sri Nágarijī and at Baháwalpur called Sri Girdhárjī.

Another large body of sectaries are the Sánwal Sháhís. In 1545 Sambat, Gurú Nának took a journey into the Sindh country and found the Kirárs ignorant of religion and without a guru. He appointed a guru to teach them. Sánwal Sháh was the name of Nának's servant, and the gurus that followed were called Nának Sháhí. The gurus of the Sánwal Sháh sect are called Sánwal Sháh potras.

The last sect of Kirárs are the worshippers of the river under the name of Jindpír. The Thákar Kirárs are the gurus of the river worshippers. This worship is most prevalent in the Alipur Tahsíl. On Sundays the river worshippers go to a neighbouring canal or river to worship. They make a raft of reeds, place on it a chirágh made of flour which they light and allow to float away. It is a remarkable thing that the spiritual guides of these four sects have quite forced the Brahmans into the shade. In influence, wealth and intelligence the Shámjī dásí Gusaíns, the Láljī Gusaíns, the Sánwal Sháh potras and the Thakars are far superior to the local Brahmans and receive much more respect. Almost the whole of trade, money-lending and banking is in the hands of Kirárs. They have no prejudice against any kind of work and will sell vegetables or shoes, load donkeys, and do other work which an orthodox Hindu would refuse. They make very industrious cultivators,

In correspondence and accounts Kirárs use a peculiar character called Kiráki. They are not popular among the people. And a proverb says :

Kán Kirár kutte dá,
Visáh na kije sute dá.

"Don't trust a crow, a Kirár or a dog even when asleep."

And a song is sung of their cowardice—

Chár chor,
Chaurási assán,
Hamlá kitá chor,
Drukiose assán,
Lánat chorán !
Shábás assán !
The robbers were four,
And we eighty-four.
The robbers attacked,
We ran away,
Down the robbers !
Well done we !

Still they have all the merit of thrift and industry, and in spite of the proverb are generally trusted by their Muhammadan neighbours. The earlier Muhammadan rulers seem to have behaved with toleration to the Kirárs. The Hindu revival led by Shámjī, Láljī, and Sánwal Sháh took place while the Gházi Kháns were rulers. Latterly however they were very badly treated. They were allowed to ride on donkeys and were obliged to wear caps instead of turbans under certain circumstances. Unmentionable indignities were inflicted on them. In documents they are described as *Mati-ul-Islám* or subject to Islám.

10. The Labánás settled here during the rule of the Sikhs whose religion they still profess. Their chief occupation is rope-making. Some have become rich, and trade and lend money ; a few have taken to agriculture and make industrious cultivators. At the census of 1868 there were more Labánás in this district than in the rest of the Mooltan and Deraját Divisions put together.

11. The Brahmans are either Sarsúts or Pushkarnas. They are in a state of insignificance, socially as well as religiously. Generally ignorant, few have even knowledge enough to perform a Brahman's ritualistic duties. In suits between Brahmans turning on Hindu law or Brahminical custom, they invariably call Kirár witnesses to give evidence on the law.

None of the other Hindu tribes call for any notice.

12. The following statement will show the area of land owned by each tribe :

Muhammadans.

			<i>Acres.</i>
Jats	...	...	852,259
Bilúches	...	...	341,504
Syads	...	...	107,990
Patháns	...	...	36,666
Others	...	...	113,907

Hindus.

Kirárs	...	...	200,226
Labánás	...	...	660
Brahmans	...	...	3,175
Others	...	...	13,347

13. The rural population are lodged in houses of three kinds.

Houses, food, and clothing. Each has its peculiar name. Kothá, a house with mud or brick walls, and a flat roof; sálh, a house with mud or grass walls and a thatched roof; garirá, an arched hut of grass. Garirás are most used in the inundated parts of the district. A very few of the wealthier agriculturists own a mári, i.e., a masonry house of one or two storeys, and some have in the neighbourhood of their dwelling-house a courtyard with sheds, which answers the purpose of a guest-house and a place for meeting to transact business. Such a courtyard is called a visákh. The following description will apply to 99 out of 100 rustic homesteads. The dwelling-house is a sálh. In front of it is a small courtyard partly or entirely enclosed with a mud wall or a fence. Within this from a tree or from posts hangs the baby's cradle (pinghúrá) made of wood, reeds or a blanket slung hammockwise, and in the corner stands a branch of a tree, the thick end of which is fixed in the ground, and the smaller branches of which are cut down to stumps. The thick part is used to tie the churning apparatus to which churning is going on, and the milk vessels, after being cleaned, are hung on the stumps of the branches to dry and air. This is called a nahílá. Outside the courtyard is a larger enclosure in which cattle are tied, and a few stacks of fodder stand. Attached to the house, or at a little distance from it, is a cattle-shed called bháná or dhúín, where the cattle are housed during the winter. Inside the dwelling-house, which consists of a single room, is a large wooden platform, manhín, on which a mat of reeds is spread. On one corner of the manhín are various baskets holding cotton in various stages of preparation for spinning. In one basket called a tongar are the best clothes of the family. There are also two trays called patrota, one of which contains the small articles for women's use: looking-glass, tooth-stick, comb, needles and thread which a bride receives from her mother and which are called sanjá; the other contains the ornaments in daily use. At the other end of the manhín are the family bed clothes, and there the father, mother and children sleep at night. Grown-up sons and daughters are accommodated on charpoys. Under the manhín are kept the store of new earthenware vessels belonging to the house, the ghurat or hand-mill, and the mortar for husking called chatto and pestle mohlá. At the other end of the room is the fireplace at which meals are cooked, and near it two baskets, the larger of which contains the cooking vessels and dishes in daily use and the smaller the family store of spices. Near the walls are two or three earthen cylinders for holding grain, clothes, and odds-and-ends. The spinning wheel, spindle (urá),

winnowing basket, sieve, the ironstand for pots when cooking, and the cotton gin are hung on pegs driven into the walls. From the roof hang one or two strings of cord for keeping ghí or cold food safe from ants and cats. A net of large meshes called a trangar is also hung from the roof which holds clothes and blankets, and if the family owns a Kuran, it is kept in the trangar. A spare charpoy or two completes the furniture. Outside the house are one or more high platforms called manhán (Hindustani machán). On these the family sleep in the hot weather to be out of the way of mosquitos. In the flooded parts of the district the manhás are from ten to twelve feet high, and in heavy floods the people are compelled to spend day and night on the top for weeks together.

14. The people usually eat two meals a day, one at noon, the other at about eight at night. Besides these, an early meal is sometimes taken in the morning which is called nirán or hánjhal, literally "the heart sustainer," and another is taken in the afternoon called picchhán. The staple food for all classes is cakes of wheat flour eaten with dál or greens. The other grains eaten are jawár, bájhra, rice, samúká and nángní. Meat is rarely eaten, except on festivals, or when an animal is killed to save it from dying a natural death or from disease. Fish is largely eaten. As already stated, dates form the staple food of the poor for months, and are much eaten by others during the season. Agriculturists drink whey (lassi) at the day meals and milk at night. As a rule, the men mess separately from the women. In some families, however, they mess together.

15. The ordinary clothing of an agriculturist consists of a plain turban, a scarf chádar of cotton cloth worn on the upper part of his body, and a loin cloth which is fastened round the waist the folds of which hang down like a petticoat. When active exertion is required, the folds are collected, passed between the legs and tucked into the waist at the back; this is called manjhlá, tahmad, or dedhá. A pair of shoes completes the working-day dress of the Jat. Shoes are described as ghetlídár if the upper leather be in one piece, or khannedár if it be in two pieces. The richer classes and the ordinary peasant on state occasions, instead of the working dress above described, wear a peaked cap (topí) with a colored turban wound over it. A dopatta of English cloth takes the place of the common chádar, and a silk lúngi or khés is added either as a scarf or wrapped round the waist; a cholí which is like a waistcoat with sleeves and skirts is worn, and in the place of the manjhlá, drawers made very full and baggy are worn, these are called shalwár, or if cut straight to the leg and tight, suthan. On the bank of the Indus and in the south of the district the long smock peculiar to the Bilúch is often seen on both men and women. Peasant women wear a scarf called bhochhan: it is called by different names according to its color; a boddice called cholí that looks as if it was made of patchwork: it is, however, a work of art, and each piece has its well-known name; a petticoat or drawers is

also worn—sometimes both are worn at the same time. In parts, especially in the north-east of the district near Rangpúr, instead of petticoat or drawers the women wear a *marjhlá* like the men. A pair of heelless shoes completes a Jat's dress. The ornaments worn differ according to the wealth of the wearer. The following are always worn except by the very poorest women:—

Kángán	or	bracelet.
Náth	or	nose-ring.
Válián	or	earrings.
Chúra	or	bracelet.

To be said to have the “ears of a cat,” *i. e.*, without earrings, is a reproach hard to be borne by the ladies of the district. Women wear their hair in four ways according to their time of life. While they are small girls, the front hair is cut straight across the forehead, and the back hair is allowed to hang loose; the hair in this stage is called *chhate*. As a girl grows up, her hair is plaited on each side of the forehead; these plaits are called *mendhián*: and the unplaiting of them is a solemn ceremony which takes place at marriage. After marriage, the front hair hangs loose, and the back hair is plaited into a tail; the front hair is called “*dharí*” and the tail, “*gut*.”

CHAPTER IV.—RELIGION, SHRINE, SUPERSTITIONS, AMUSEMENTS, LANGUAGE.

1. The religion of the *Kirárs* has been described in connection with the Hindu revival in these parts. The *Jats*, *Bilúches*, *Syads*, *Patháns*, and the miscellaneous tribes profess to be *Sunni Muhammadans*. There are a few *Shias*, remnants of the time when the *Kalhoras* ruled in *Dera Gházi Khán* and *Mankera*. The *Syads* and *Patháns* are the strictest *Muhammadans*, but even they are a good deal *Hinduized*. The *Bilúches* and *Jats* are very lax *Muhammadans*. The name of *Allah* and *Muhammad* are always on their lips, and some know their prayers and fast strictly. But their feelings of worship are entirely diverted from the Divine Being to their *Pírs*, for whom they have an excessive reverence. Every person has a *Pír*. It is not necessary that a *Pír* should be of known piety,—many, indeed, are notorious for their immorality. Nor is it essential that he should be learned. To obtain disciples all that is necessary is, that a *Pír* should have a character of being able to procure the objects of his disciple's vows. A common way of choosing a *Pír* is to write the names of the neighbouring *Pírs* on scraps of paper, and to throw the scraps into water. The saint whose scrap sinks first is selected. This mode of selection is called *chithián ghatáwan*. Each person secures the intercession of his *Pír* by an annual offering called *buhál*, which the *Pír* goes round and

collects himself or sends his deputies. They demand their *bihal* in the most shameless way, and even carry off things by force. If the disciples are slow in giving, the Pírs curse them, and pour filthy abuse on them. Besides this annual fee, the Pírs sell charms and amulets to obtain every object, and to avert every calamity, that can be imagined. It is no exaggeration to say that, with the large majority of the Muhammadan population, the Pírs have taken the place of Allah. The marriage ceremonies are largely borrowed from the Hindu ritual, and among some tribes a Brahman as well as a Mullán is in attendance. At harvests, the first charges on the crop are the fees of the Mullán, called *rasúl arwáhí*, and those of the Brahman called *ganesh*. Jats declare that they are ruled by the Shara Mulamdí, but they grudgingly allow a widow even a life tenure, and would give daughters no share at all in their fathers' estate. Pilgrimages to the shrines of saints are very common, and are made both as a religious duty and an amusement.

2. The shrines of this district are very numerous, and the more important are frequented by pilgrims from Dera Gházi Khán, Mooltan and Baháwalpur. It will be sufficient to give an account of the most famous, and merely to name the others.

At the north-west corner of the district, in the town of the same name, is the shrine of Dín Panah. He was a Bukhárí Syad, who settled here three hundred years ago. He took up his abode in the house of Mussummát Suhágan, the wife of Ako, a jat of the Makwal tribe. When Suhágan's daughter was married, Dín Panah gave himself as part of the dowry. He died in A. H. 1012, on the west bank of the Indus, and was buried there. The Makwals of the east bank tried to steal his coffin, but were prevented. A feud broke out between the Makwals on each bank of the Indus. At last Dín Panah revealed himself in a dream to the brothers of Ako, and told them to make a coffin for the east bank of the Indus, and that his corpse would be found in it also, as well as on the west bank. Since then there has been a shrine on each bank of the Indus. The tomb is a fine domed building, covered with blue and white tiles. The Makwals are still keepers of the shrine, and are called Khádims. The present representative of the family is Muríd Játir. Fairs are held here in Chetr and Sáwan, to which people come from Bakhar, Leiah, Mankera, and from this district. The offerings made are large, being estimated at Rs. 2,000 a year. At all times the tomb is a place of pilgrimage for Hindus as well as Muhammadans, and is a favorite shrine at which to cut off the *jhand* or first hair that grows on a child's head. Daira Dín Panah forms a refuge for an objectionable set of beggars. Any rascal, who is discontented at home, or prefers begging to work, wraps a brown *pagri* round his head, and, calling himself Sháh dá Fakír, considers himself entitled, under the authority of a traditional saying of Dín Panah, to beg within 14 kos of Daira Dín Panah. He requires no permission or institution from the keeper of the shrine, but makes raids on the

neighbourhood on his own account. These Sháh dá Fakírs travel about with bullocks and donkeys on which they load what they can get. They compel people by abuse and curses to give. They are disliked by the people, and have become such a nuisance that the Syads of Khai, an adjoining village, have taken to remove their crops at night in order to escape the fakírs' exactions.

3. Three miles south of Muzaffargarh, in the village of Rampúr, is

Dáúd Jaháníá.

the shrine of Dáúd Jaháníá, called by the vulgar Dhadhú Jaháníá or simply Dhadhú. It was founded by Sheikh Allahdád Kureshí, who came from Arabia and, having acquired sanctity in the service of Makhdúm Jaháníá Jahán Gasht, settled at Rampúr. His descendants are Makhdúms of the shrine. They are now Metla jats. They say they became Metlas from Kureshís because so many Metlas live in the neighbourhood. Additions were made to the tomb by Nawáb Muzaffár Khán, and it was repaired by Diwán Sáwan Mal. The shrine is largely frequented by Hindus and Muhammadans. A fair is held there every Thursday, and in Chetr and Sáwan the assemblies are very large. A common vow at this shrine is called atá ghatá, literally "flour and sheep." When the object of the vow has been obtained, the devotee and his family repair to the shrine, taking a sheep and a maund or 20 sérs of flour. The head, skin and shoulders of the sheep they give to the Makhdúm, the rest is cooked, and the flour is made into bread and distributed to the poor. The offerings at this shrine have been farmed to a Kirár. The shrine has a celebrity for curing leprosy, and lepers from all parts of the Punjab and Kashmir resort to it, and persons who have obtained cures, present models of the diseased limb in silver and gold. Baths of hot and cold sand are prepared by the attendants of the shrine for lepers. Such baths are called rangin, the literal meaning of which is, the vessel in which dyers dye cloth. The charge for a rangin is Re. 1-4. Kádir Baksh Metlá is the present Makhdúm of Dáúd Jaháníá.

4. At the town of Shahr Sultán is the shrine of Alam Pír. It

Alam Pír.

was founded by Sheikh Alamuddin *alias* Alam Pír, a Bukhári Syad, descended from the Makhdúms of Uhhh in Baháwalpur. In 1167 A. H. Shahr Sultán was carried away by the river. The shrine and the town were rebuilt at a distance of two miles from the old site, and remain to this day. This shrine is remarkable for the frenzy which attacks the persons, especially the women, that resort to it. In the month of Chetr a fair is held here on each of the Thursdays and Fridays, to which about 5,000 persons come from Dera Gházi Khan, Baháwalpur, Mooltan, and this district. As the women, most of whom are in kajáwas on camels, or riding on horses and bullocks, get near Shahr Sultán, they seem to take leave of their senses, and begin to sway the body violently from the waist upwards. Their hair gets loose. They screech, and look like so many bacchanals. In their excitement many fall off their camels on to the ground. The soil of Shahr Sultán is sandy, and they come to no harm. I saw a man, his wife, and baby come within sight of

Shahr Sultán at fair time. The woman and baby were riding on a bullock, which the husband was leading. The woman suddenly slipped off the bullock, put the baby into her husband's arms, and started screaming at the top of her voice across the plain that lay between them and Shahr Sultán, leaving the poor man standing on the road with the baby and bullock. This frenzy, which even attacks women at home as fair time draws near, is believed to be caused by the woman being possessed by a jin, and the term used for a woman so possessed is "jin khedan," to play jin. After having seen the performance, one may be pardoned for translating "jin khedan," "playing the devil." Within the fair, "playing the devil" and casting him out goes on in a regulated manner. In the house of the Makhdúm of the shrine and in the house of other Syads of the Makhdúm's family, women of the upper class have their attacks of jin, and have them cast out to the accompaniment of a Mirási woman playing on a drum and singing. For ordinary people, four sites are chosen, over each of which a Khalífá or deputy of the Makhdúm presides. The possessed women pay him a pice or a fowl, take their seats and begin to sway their bodies backwards and forwards, gradually increasing in violence. The excitement is kept up by a drum being played. The Khalífá goes round and lashes the women with a whip, and pours scented oil on them. As each woman gets weary, the Khalífá pronounces some words and sprinkles a little water over her. The jin is cast out. The woman becomes quiet, and is dragged away in an exhausted state by her friends. It is hard to imagine a more thoroughly repulsive exhibition. It is difficult to say how much of these attacks are assumed, and how much involuntary. The assaults of jins at home may certainly be set down as affected, the object being to make the husband take the wife to the fair. The frenzy on coming near the shrine seems involuntary. The paying of the Khalífá's fee is as deliberate an act as taking a railway ticket, but when a woman takes her seat with the swaying crowd she certainly loses all control over herself.

5. The other shrines of note are—Baggá Sher, literally "white tiger," in the village of Khánpúr, 6 miles north of Muzaffargarh; it is so named because a white tiger defended the saint's cows from thieves. The shrine of Miran Hayát is in the village of Panj Giráin, seven miles south of Muzaffargarh; there is a stone figure of a camel on which the saint used to ride; there is a forest of date trees near the shrine the branches of which are said to be like cobras: a branch kept in a house will drive away cobras. The shrine of Dedhá Lál in the village of Harpalló is a fine domed building; this shrine, Baggá Sher, and Sheikh Laddú are efficacious for cattle to visit during an epidemic. The shrine of Mosan Shah in Jalwálá Pír Amír has a considerable celebrity, but has no remarkable buildings. In the Sanánwán Tahsíl are the shrines of Nur Sháh in the village of Talai Nur Sháh, of Sheikh Pallia and Háji Ishák, which have a certain local reputation. In Alipur there are no shrines worth mention, except Alam Pír, which has been already described. The favourite time for pilgrimages is Chetr, *i. e.*, from the middle of March to the middle of April, and Sáwan, *i. e.*,

from the middle of July to the middle of August. Sáwan is chosen because it is the date-picking month. Along every road dates are being gathered, dried, and taken away for sale. The pickers are allowed to give a handful to each passer-by. Thus pilgrims in Sáwan are almost freed from the necessity of taking provisions with them. I do not know why Chetr, the month before the harvest, should be chosen for pilgrimages.

6. In the Thal, far from any shrine, and on the roads leading to the noted shrines, may be seen occasional thorn trees, covered with rags similar to those near holy wells in Ireland. These are called the Lingrí Pírs, or Rag Saints. To account for its existence far from any shrine, it is said that it satisfied the want of women for a place of pilgrimage, and on the roads leading to shrines the rags are said to be placed as evidence that the vow has been performed. Pilgrims also tie knots in the grass of the roadside leading to a shrine, and a common form of making a vow is "if you grant me my desire (tedá gandh badhesán) I will tie a knot to you," that is, "I will visit your shrine."

7. The ceremonies observed by the majority of the Muhammadan population, which consists of Jats and Bilúches, will now be described. Syads and Patháns have distinctive ceremonies which do not differ from those in use in other parts of the Punjab.

8. No particular rites are observed on the birth of a girl, which is considered a disaster. When a boy is born, a knife is buried upright in the ground near the head of the mat on which the mother lies (women are delivered lying on a mat on the ground, never on a bed). The knife is to keep away jins. The village Mullán is sent for, and in the child's right ear repeats the call to prayer, and in the left "Allahu akbar." Alms and food are distributed. Before the child is allowed to suck, a small quantity of sugar is placed in its mouth by a person of the family who is of well-known good character and disposition. Bilúches squeeze the liquor from asses' dung into the child's mouth, which is supposed to make it firm in battle. This administration is called ghutí. On the first, or at latest on the third, day after birth, the child is named, after consultation with the Pír and Mullán. Between the seventh and twenty-first, one or two goats are killed. The head, feet, entrails and bones are packed into the skin and buried. The flesh is cooked and divided among relations and the poor. The name of this ceremony is akíká.

9. The next ceremony in a child's life is the solemn cutting of its hair. A child's first hair is called jhand, and the act of cutting the hair off is jhand laháwan. Every child has its jhand cut off at the door of the village mosque. This is called vadhíán dí jhand laháwan, "to cut off the hair according to ancestral custom." This ceremony is an occasion for

a 'gathering of friends, and for a feast. But, before the child was born, the parents have made vows to more than one saint to cut off the child's hair at his shrine. Successive growths of the child's hair are accordingly cut off at the shrine of each saint to whom the parents have vowed. This votal cutting of the hair is called *manautí di jhand laháwan*.

10. From three months to ten years boys are circumcised. No particular age is fixed, but it is thought well to get the ceremony over soon, because boys are less liable to attacks of jins after it has been performed. Among the rich much money is spent, and the rite is performed with as much display as a marriage. It is called the small marriage. Taking a wife is the big marriage. The operator is always a Pirhain, a caste who live by this industry. They are so named because the Prophet gave his coat, "pairáhan," to Sheikh Núr, one of their ancestors, as a reward for circumcising a convert after a barber had refused. Since then this service is not performed by barbers. The local name for circumcision is *tahor*, said to be derived from *tahúr*, which means in Arabic purifying.

11. Marriages are arranged on two principles. An exchange of brides is effected, this is called *vatá*; or money is paid for a bride. Money marriages are called *allah námi* marriages, but, as the people themselves admit, the name is a fiction. A few persons do not receive money for girls. They are not looked on with commendation, but are ridiculed, as parting with a valuable property without receiving an equivalent. There are no forms of betrothal. The relations manage the matter without the intervention of go-betweens, such as *Nái* or *Mirási*. From reading the accounts given by residents of this district it would seem as difficult to arrange an engagement as to make a treaty. There is a capital account given of the conferences in the vernacular Settlement Report by Kází Ghulám Murtázá, Extra Assistant Settlement Officer. Even after everything is settled, the mothers of the parties meet, and have a long talk in which they pretend to be personally anxious for the marriage, but put forward every obstacle that can be imagined. These are gradually explained away, until the aversion of their husbands to the match alone remains. After discussing the obstinacy and perverseness of the husbands, one gives the sign of giving way by saying, "Well, I suppose we must put compulsion on these stupid men." After that, all hindrances disappear like smoke. All the conversation at these mothers' meetings is as well known beforehand as the questions and answers of a catechism. When the engagement has been settled, the bridegroom's friends take the following clothes to the bride:—

A sheet—*bhochhan* or *chuní*.

A *cholí*.

A petticoat.

Custom varies as to whether the bridegroom should accompany these presents,

The following ornaments are also given :—

A pair of kangans or bracelets.

A hassí, a solid necklace.

A mundrí or ring, with a phatí or sort of shield on it.

The kangans and hassí are not given by poor people, but the mundrí and phatí are *de rigueur*, and in the opinion of the women no betrothal is complete unless the mundrí and phatí are given. The account of how the bridegroom's family are mulcted is very amusingly given in the vernacular Settlement Report, but is too long to be repeated here. To get a bride by an allah námi marriage cannot cost the bridegroom less than from Rs. 70 to Rs. 100 at the very least. The actual ceremonies of marriage consist of two parts : (1) the nikáh, or wedding ceremony according to the Muhammadan ritual ; (2) the ceremonies which are not connected with the religious rite. These are all known by the general name of sagan and are very interesting, some are directly borrowed from the Hindu rituals. In others, remnants of the time when marriage by capture prevailed can distinctly be traced. Others are connected with the personal adornment of the bride and bridegroom. A marriage consisting of the bare nikáh and without any of the usual ceremonies is called a dhangerá, which means a kicking-strap tied on a cow while milking. The term is sufficiently expressive. A few days before the marriage the plaits of the bride's hair are solemnly opened by the most honoured women of both families. Her body is rubbed with chikún, a mixture of turmeric, barley, flour, and sweet oil, to increase her personal beauty. With the same object she is bled. The bride is furnished with an iron knife, and she is never allowed to be unaccompanied by a female friend. Similarly, for two days before the wedding and during the wedding, the bridegroom is armed with a knife or sword, and a friend of the same age as the bridegroom is appointed to accompany him day and night. This companion is called sabálá or ánhar. This custom is evidently a relic of marriage by capture, the bride's arms and companion being intended for defence, and those of the bridegroom for aggression. On the day fixed for the marriage, the bridegroom's party, called janj, proceed to the bride's house. The nikáh is read by the Mullán. New clothes are then sent by the bride to the bridegroom, and by the bridegroom to the bride. Then the bridegroom, taking a pillow under his arm and accompanied by his ánhar, proceeds to the bride's house. On the threshold is an inverted chhúni or lid of a ghará, underneath which is a rupee, 8-anna or 4-anna piece. Before entering, the bridegroom stamps on the chhúni with his foot. If he fails to break it he gets well laughed at by the women. The potter, and, among Magassí Bilúches, the barber, appropriates the coin. The breaking of the chhúni represents the demolition of the last defences of the bride's party. After the bridegroom has entered the bride still offers a show of resistance. The bridegroom first lifts her by force from the seat on which she is, to another. Then she presents her closed fist to him, in which is a lump of gúr. This, after pretended struggles, he forces from her, and the bridegroom's

victory is complete. Then follows the *sir mel*, or joining of heads, which represents the consummation of the marriage, though this does not actually occur until the bride reaches the bridegroom's house. The *sir mel* is usually performed simply by the chief women of the bridegroom's family holding the heads of the bride and bridegroom together. Among persons of position the *sir mel* is effected as follows. The *ánhar* leads the bridegroom to the spot where the bride is sitting with her hands over her face and a *kurán* before her. The bride's companions give the bridegroom leave to uncover the bride's face. He does so. The bride's glance should first fall on the *kurán*, then on her husband. Then follow a number of ceremonies, most of which are taken from the Hindu rituals, and some of which point to abundance and increase. The bride and bridegroom are seated on a basket. Their clothes are knotted together, and the *Mirásin* places the knot seven times on the head of each, while she sings the verses appointed for the occasion. This ceremony is called *láván*. Then the *Mirásin* places a flock of cotton on the bride's head. The bridegroom blows it away seven times. This is called *phúl chunnan*. Then the bridegroom holds his hands open and joined together with the palms upward. His hands are filled with flour, til or salt. Underneath his hands are placed the hands of the bride. He allows the flour or salt to run from his hands into the bride's. Then the bride runs it into his hands. This is done seven times, and is called *til veltrí*. By this time the night is well advanced and the bridegroom's party return home, taking the bride and a female friend. Sometimes the bridegroom's party do not return home till the next day. The bride remains seven days in her husband's house. These seven days are called *satúvárí*. After this she returns to her parents' house for a time.

12. It may be asked which of the ceremonies described would,

Which ceremony is conclusive evidence of betrothal and of marriage. if proved to have occurred, be conclusive evidence of the often disputed fact of a betrothal and of a marriage willingly made by

the bride. Of course every part of the ceremonies would be corroborative evidence, but if it was proved that a woman received her *phatí* and *mundrí*, the betrothal may be admitted to be complete, and if the *sir mel* be proved to have taken place, the marriage may be accepted as an accomplished fact. More weight is really attached to the *sir mel* than to the *nikáh*, which is generally done most perfunctorily as far as the woman's consent is involved. *Dhangera* or "kicking-strap" marriage, if denied by the brides, should be looked on with the greatest suspicion by a Civil Court.

13. At the moment of death, alms are given to the poor. The

Ceremonies connected with death. corpse is washed by the *Mullán* if deceased was a man, and by the *Mullán's* wife or

by the female relations if deceased was a woman. The corpse is dressed in grave-clothes called *kafan*, is placed upon a charpoy, and over it is spread a rich cloth called *uchhár*. The corpse is carried to the graveyard by the friends and relations. The *uchhár* is the perquisite of the grave-digger. The corpse is placed in a shelf (*sámí* or *asámí*) at the side of the bottom of the grave. Its

head is towards the north, and the face to the west. Near the mouth is placed a brick, with the kalma written on it. No food is cooked that day in the deceased's house, but friends send food for the family, and for visitors who come to offer their condolence. Such food is called *kaurá vatá*, and visits of condolence, *mukán* or *parchháván*. At every stage of the proceedings, presents are given to the Mullán, and for forty days after the death, food is daily given to him. There is no doubt of the truth of the local saying—

Fajar de vele Mullán karin phukár
Yá Rab Sáin koi chokhá mār!

In the morning the Mullán breathes a prayer
"O Lord God! kill a rich man to-day!"

Two useful words to remember in all domestic ceremonies are *kándhá*, an invitation, and *vail*, a present to the attendants, midwives, barbers, *Mirásis*, Mulláns and Brahmans. One would like to be able to trace a connection with the old English word *vail*, meaning present to servants.

14. The ceremonies practised by Hindus differ little from those of other parts, except that in consequence of their greater poverty there is less display.

Hindu ceremonies.

They frequent the Muhammadan shrines, and cut off their children's *jhand* there, in the same way as has already been described. On the way to a funeral, music and dancing accompany the party, and all kinds of buffoonery are practised.

15. Most of the amusements of the people have been incidentally

Amusements.

mentioned already, such as the racing of bullocks at *Visákhi*, going to fairs at shrines, marriages, funerals, and visits of condolence. Wrestling, here called *malhan*, goes on at every large meeting. *Jhumir* is a circular dance which Jats dance at weddings, and wherever they happen to collect in large numbers. They move round in a circle, dancing and clapping their hands in time. Three kinds of *jhumir* are well known: *lanmochar jhumir*, or southern *jhumir*; *traitári jhumir*, i. e., *jhumir* with three claps of the hand; *tikhí jhumir*, or quick-time *jhumir*. A young man who can't dance *jhumir* is very lightly esteemed. The ladies will greet him with—

"Na jhumir na tárf.
Te ajái múnh te dárhí."

"Can't dance *jhumir* or clap your hands!
Why, the very beard on your face is no good."

The *Kirárs* play *chhej*, a very stupid performance, in which they stand in a circle with sticks like policemen's batons in their hands, and move round to the beating of a drum, striking their sticks together as they move. Boys' games are—

Ditte danda, or Tip cat.
Danda giti, or Hopscotch.
Chida, Marbles.
Kanda, a sort of prisoner's base.
and
Doda, Base.

It would be difficult to find a more superstitious people in the world than the residents of this district. They are firm believers in jins and the evil eye.

Superstitions.

Sap dá khádá bachde.

Nazar dá khádá nahín bachde.

The snake-bitten escapes.

He that is affected by the evil eye escapes not.

The jins appear to be a simple lot, and are easily outwitted or diverted. A ring drawn in the dust, round a heap of corn or a person, will keep them away. The knives which brides and bridegrooms wear are intended to keep jins off. In consequence of this credulousness, Syads, Kureshís, the keepers of shrines, and any impostors who can inspire confidence, drive a great trade in selling amulets (rakhri, chapri and phul). Among other amulets may be mentioned "sinhári da phul, the charm of the churndasher." This has the effect of attracting all the butter in the churns of the neighbours into that of the possessor of the charm. The price paid for an amulet is called mokh. It would be hopeless to attempt to note all the superstitions, but the following may be mentioned: if an enemy gets any of the chikún which is rubbed on brides to increase their beauty, and burns it, he will cause disunion between the newly-married pair. Among agricultural superstitions are the following: on the bank of the Indus, in the Sanánwán Tahsíl, it is believed that if methra (*Fenugreek*) seed is sowed before noon, methra will come up; if sowed after noon, ussún (*Brassica eruca*) will come up. It is commonly believed that an animal born in Sáwan (July-August) will be unlucky. The strength with which this belief is held was proved this year (1880). Six Government stallions were, for the first time, provided for this district, and from April, when they arrived, to July, were eagerly resorted to. From July to October hardly a mare has come to be covered. In November they are beginning to come again. The extreme respect and tenderness with which the people regard persons of reputed sanctity are remarkable. The younger brother of the keeper of a shrine of noted sanctity in an adjoining district used to frequent Kot Adú during the settlement. He used to get hopelessly drunk, and be seen sprawling about the prostitutes' huts in open day. The Muhammadans of the place always said of him when in this state "he is engaged in devout contemplation." The people, Hindus and Muhammadans, are thorough fatalists. They never personally commit thefts or murders, or bring suits without foundation. It is that unpleasant power, their Nasib, which caused all the trouble. They are firm believers in omens. The distinction between good and bad omens under different circumstances is bewildering. One omen is, under all circumstances, good, that is, to put up a blue jay; and, strange to say, to meet a Mullán, a Brahman, a fakír or a beggar is always a bad omen.

16. The language is the same as that spoken in Mooltan, Baháwalpur, Dera Gházi Khan, and the south of Dera Ismail Khan and Jhang. It is called by the people Hindí and Hindikí, and, in the Bilúchí-speaking parts of Dera

Language.

Ghází Khan, is known as Jagdallí, from Jagdal, a Jat. It has been named Mooltani by Europeans, but no native knows it by this name. It resembles Punjabi and Sindhi, and differs from both in many particulars. The case-endings agree partly with Sindhi and partly with Punjabi, while some are peculiar to Mooltani. It resembles Sindhi, Pashtu and Persian by using an intricate system of pronominal suffixes from which the sister dialects of India are happily free. The inflections of the verb are peculiar to Mooltani, and differ both from Sindhi and Punjabi. Mooltani excels the Indian dialects, and resembles Sindhi in having a passive voice instead of being reduced to the clumsy compound with *jána*, to go. *Maríndán*, I am being beaten, is much handier than the Hindustani, *máin mára játa hún*. Mooltani is a pure Sanskritical language. It contains many Sindhi and Punjabi words, and has a copious vocabulary of its own. It has an abundance of grammatical forms which show that it is in an inferior state of development. Like all languages spoken by a rude people, Mooltani is extremely rich in concrete, and absolutely without abstract words.

17. There are no written books in Mooltani, but there is a large body of unwritten poetry, songs, proverbs, riddles and aphorisms which throw great light on the national customs and thought. Whenever Jats collect they spend a great part of the night in singing *dorhás*, or couplets. To be able to quote an appropriate proverb will send away a Jat laughing, although the moment before he has been vowing that he has just undergone all manner of violence, the least of which is robbery and murder. And a knowledge of their sayings and songs makes association with the Jats much more pleasant than it would otherwise be. It has been attempted elsewhere to give a fuller account of the Mooltani language illustrated by folk-lore.

18. The account given of the superstitions will not have given a very high opinion of the character of the people, but they have many good points. They are very hospitable. "Not even an enemy should go away when the baking-plate is put on the fire," says a proverb. They are ready to render help to one another. If a man's house is swept away by a flood, the whole village will help him to save his property. If his cattle are stolen, he has no difficulty in getting several parties of men to follow the thieves. At ploughing and sowing time they are ready in bringing their bullocks and ploughs to help. They are very docile, and only require kindness and firmness to be easily managed. At the same time, when an order is distasteful, though it meets no open opposition but often ready assent, yet it is liable to be frustrated by stolid indirect resistance. There never was a people that better understood the "I go, sir, and went not" kind of disobedience. Morality is very low. The common people will steal anything they can. They are so mendacious that the pleasure of associating with them is spoilt by the ever-present knowledge that you may be taken in. Sexual immorality is universal. They are not a cheerful people. In conversation they seem to remember nothing but droughts, failures of canals,

blights, deaths of cattle, and every possible misfortune that can befall a farmer. They are absolutely wanting in any public spirit. I have heard a Tahsildár, as the worst punishment he could inflict on a recalcitrant zamíndár, threaten to get him appointed on the district committee.

CHAPTER V.—AGRICULTURE AND OTHER INDUSTRIES.

1. With reference to its agricultural operations, the district consists of three parts, a division which is based on the descriptions of irrigation—
Division of the district in regard to agricultural operations.

1. The alluvial tract comprising upwards of one-third of the cultivated land, and depending for its irrigation on the rising of the rivers assisted by canals in about one-seventh of its area.
2. The canal tract comprising more than half the cultivated area of the district, and dependent on inundation-canals assisted by wells.
3. The well tract containing about one-sixteenth of the cultivated area of the district and entirely dependent on wells.

2. In the alluvial tract no rotation is observed, nor is it necessary. The strength of the soil is renewed every year by the deposit which the rivers bring down. In the canal and the well country the necessity of changing the crop is thoroughly understood. The general practice is to divide each estate into two parts. In one part, kharíf crops are sown, in the other rabbí. The following year, kharíf crops are sown in last year's rabbí half, and rabbí crops in last year's kharíf half. This alternation is called dúpar. There are exceptions to this rule, especially in the richer lands and where manure is abundant. In sugarcane lands the rotation is generally turnips, sugarcane, indigo and wheat. These lands are always under crop, and the strength of the soil is maintained by heavy manuring. Wheat and barley are believed to do well after indigo and poppy. Wheat, cotton or melons thrive after sugarcane. Jawár, bájra, moth, múng and másh do well after wheat and barley. The five kharíf crops just mentioned are usually the end of a series of crops. After any of them the soil is considered to be exhausted, and to require renewal by manure and constant ploughing. The people appreciate repeated ploughings as a restorative. Their expression is that the mouth of the soil is opened by the ploughs, and attracts the sun and moon. In the richer parts the land is never allowed to lie fallow. Where manure is scarce, land is cultivated every alternate year. Where the soil called dramán, which is easily exhausted, exists, it is sometimes allowed two or three years' rest between each crop. All rules of rotation and fallows

are liable to be broken if the canal-running season is prolonged. Like inundation-water, canal-water is so rich in silt that it manures as well as irrigates.

3. The alluvial tract is never manured. The deposit renews its strength. In only one case is inundation hurtful, that is, when the flood deposits its silt on the land nearest the river bank, and as it finds its way inland flows over salt land which it imbibes. When in this state it is called Kálá Pání. In the remainder of the district the use of manure is general. The manures in use are—

1. Farm-yard manure.
2. Indigo refuse called valh.
3. Clay from the canal spoil banks.
4. Sand from the Thal sandhills.

The two last kinds are known as paná. Manure is applied by being worked into the soil. Cattle are tied in lines called dhárá. Sheep and goats are penned on it. In the Thal a fee of a quarter of a sér of grain will procure the services of a score of goats and sheep for a long winter night. The fee is called áhali. Manure is pulverized and applied by top-dressing to growing crops. In this state it is called chháná. It is applied by handfuls to young plants. The name for this is chungí devan.

4. Farm servants, here called ráhak, are usually hired by the year, *i. e.*, from the beginning of Harh to the end of Jeth. They are sometimes hired by the half-year. Besides the usual farm work, if the master be responsible for supplying labor on the canals, the servant is sent to do the work. The wages of a farm laborer consist of four parts—

Khádh, or diet	...	...	From 1 to 1½ maund per month.
Kirhiún	...	...	Cash at 8 annas per month.
Bijrái	...	...	A present at sowing and harvest.
Varsá	...	...	A present of from 2½ to 3 maunds in a lump.

Clothes are sometimes given. The ráhak also gets fodder for one animal, and a share in the greens cooked for the master's family. He accompanies the family on pilgrimages and gets fed going and returning. The pay of a ráhak cannot be less than Rs. 7 or 8 a month. Reaping is usually done by laborers, hired temporarily. They get one sheaf in every forty as their wages. Cotton is picked by women and children, who get a share of what they pick as their wages. Winnowers are hired, and receive one-fortieth of the grain as wages. Indigo is churned by hired laborers who get from Rs. 8 to 10 per month.

5. Agricultural instruments do not differ from those in use in the rest of the Punjab, but their names, and those of agricultural operations, are Sindhi or peculiar to Mooltani.

Principal crops and area under each.

6. At settlement the following were found to be the chief crops grown :—

Kharif.

Cotton	...	...	20,714 acres.
Indigo	...	...	20,830 "
Jawár	...	...	20,817 "
Bájra	...	...	17,947 "
Rice	...	...	10,276 "
Sugarcane	...	...	4,349 "
Moth	...	...	4,988 "
Til	...	...	4,081 "

Rabbi.

Wheat	...	...	201,497 "
Peas	...	...	25,385 "
Gram	...	...	12,627 "
Turnips	...	...	12,500 "
Barley	...	...	10,962 "
Ussún	...	...	8,545 "
Mohri	...	...	4,245 "

7. Cotton is grown in every part of the district except the inundated lands. The land is prepared in February and March. Five to seven ploughings are given, and the clod-crusher is dragged over the ground after each ploughing. The seed is prepared by being rubbed in cow-dung, and then dried. The best time for sowing is April. The seed is sown broadcast, and, after being ploughed in, the land is divided into beds of a suitable size for watering. Two irrigations are then given at a short interval from one another. When the young plants are about two feet high, a plough is driven lightly among them to loosen the soil. The cotton ripens at the end of September, and picking goes on from then till December. Cotton is picked by women every eighth day. They receive about one-sixteenth of what they pick as wages, which are called bhánji. The first cotton picking is called láwin pheran, and each picking is called an oya. Four to eight sérs of seed are sown to the acre, and the outturn is about five maunds. The enemies of the cotton crop are múlá, a blight that begins at the stem, and spreads over the plant, the soil becoming water-logged (soma), and a red worm that attacks the cotton in the pod.

8. Indigo grows only in the richest soil, but has this advantage, that it produces fine crops in poor draman land. The land is prepared in February and March, and the seed is sown from March 15th to May 15th. Indigo is usually sown every year, but it is possible to get crops for three years off the same plants. In its first year it is called "rop," in the second "mundhí," and in the third "trundhí." Indigo is ready for cutting from July 15th to September 15th. It is in its prime when it has been from 12 to 15 days in flower. If the flowers fade and become yellow before it is cut, the outturn will be small. It is cut in the morning and

carried in bundles to the vats, where it remains till the afternoon. Then the churner (vilora) comes and puts the indigo into the vats, and weighs it down with heavy logs of wood. Water is turned on, and the vats are filled two-thirds full. The vats are in sets of three, two large and one small. A set of vats is called a jorí, and a number of sets together, a khárhá or akhárhá. When one watch of the night remains, the indigo has been sufficiently steeped. The churner takes out the plants, and, with a churning-stick called madhání, churns the water for about two hours. The sediment is allowed to sink to the bottom of the vat, and the water is run off. The sediment is then placed in the small vat, and is allowed to settle again. Then the water is run off a second time. The sediment is removed, and made into cakes called gítí, and dried. At each churning a pair of vats produce from $1\frac{1}{2}$ to 3 sérs of indigo. The preparation of the indigo is most carelessly done. The indigo is soaked in muddy water from a canal. While the cakes are drying, no precautions are taken to prevent sand and earth being mixed with the indigo, and some people deliberately mix sand with the indigo. The consequence is that, though this district should produce better indigo than Bengal, because there is little rain, which is the curse of the Bengal planter, Muzaffargarh indigo fetches only from Rs. 40 to Rs. 90 per maund, while Bengal indigo sells for Rs. 200. If indigo is grown for seed, it ripens in November and December. It sells for Rs. 2-8 to Rs. 3 per maund. Sixteen sérs of seed are sown to the acre, and the outturn is fourteen sérs of indigo dye. The stalks and leaves, after being taken out of the vats, are called valh, and form a valuable manure.

9. Jawár is sown for fodder in March and April, and for grain in July and August, but in the Thal a second sowing is made for fodder in July. The grain ripens in October, and, while ripening, is protected from birds by men on high platforms with slings and crackers. The ripe ears are cut off and thrashed. A maund of seed is sown to the acre, and the outturn is from four to six maunds per acre.

10. Bájra is sown from July 15th to August 15th. It is protected while ripening like jawár. When the ears are ripe, they are cut off, and the stalk is left standing. The stalks of bájra are never cut and stored for fodder like jawár, but are left standing for the cattle to eat, and great waste is the result. Eight sérs of seed are sown to the acre, and the outturn is from four to seven maunds.

11. Rice is sown from 15th April to 15th May in nurseries, which are manured a hand-breadth deep with ashes, or finely pulverised manure (páh), and which are very carefully watched and weeded when the seedlings are about eight inches high, which they become in a month. They are planted out at the distance of a finger from one another in well prepared land in which water is standing. This water is allowed to dry up once, but after that the plants are kept submerged. Rice is one of the few crops

which is carefully weeded. It ripens from August to October. The grain is extracted by the sheaves being beaten against a log or a bank of prepared clay. It is firmly believed in the south of the district that if any calamity happen to a rice crop it will turn into samúká. The outturn of rice is from eight to ten maunds per acre.

12. Sugarcane is grown in every part of the district except the Thal and the inundated tracts, but, as it requires capital and abundant manure, it is mostly found in the neighbourhood of towns. The selection of land for the next year's sugarcane is generally made in land which has just borne wheat. Beginning from May, the land is ploughed from four to five times during the summer. After each ploughing the land is rolled and levelled. It is then heavily manured. Between September and January a crop of turnips is taken off the land. The local theory is, that turnips do not exhaust the land. The truth is, that fresh unrotted manure is used which requires the extra handling and watering caused by raising a crop of turnips to make it sufficiently decomposed to be beneficial for sugarcane. After the turnips have been removed, the ground is ploughed eight times more and rolled. The sugarcane is then sown in February and March. Canes for seed have been stored in mounds covered with earth called "tig," since the last year's harvest. These are now opened, and the canes are cut into pieces with one or two knots in each. A plough, which has a brick fastened across the sole to make a wide furrow, is driven through the ground. A man follows, who places the pieces of sugarcane continuously in the furrow, presses them down with his feet, and covers them with earth. Then a log of wood called gihal is dragged over the field. After planting, the only care which sugarcane requires is constant watering and hoeing. Judging from the accounts of other countries, hoeing is not done often enough. Two hoeings are considered sufficient. Sugarcane is cut and crushed from the end of November to the end of January. The double-roller crusher is always used. In the mode of crushing and the management of the labor required, this district does not differ much from the rest of the Punjab, but a few points may be noted. There are ten attendants on the crusher and gúr boiler. The crusher is worked from midnight to 10 A.M. This time is chosen as less severe on the animals than the day, and also because fewer visitors come at this time, it being *de rigueur* to give every caller as much juice and cane as he can eat, drink and carry away. It is very difficult to estimate the net profits of growing sugarcane. Each owner extracts his own juice, and makes his own gúr. The wages of the workmen are paid in every possible form. For instance, the dhorá, or man who puts the canes into the crusher, gets one blanket and a pair of shoes; when crushing begins, a quarter of a sér of gúr and a chitak of tobacco per day, Rs. 4 and four sérs of gúr per month; a present of from Re. 1 to Rs. 2 when the work is finished, and fifteen sérs of wheat under the name of bijrái. Then, again, some attendants are paid by the kachá month, and some by the pakká month. A kachá month is a calendar month. A pakká month is when a sugar-crusher has been worked thirty times, and each time

has extracted ten maunds of gúr. A pakká month may occupy two calendar months or more. We get into more certain ground when the owner of the cane has no sugar-crusher. He pays the owner of the crusher one-third of the outturn of gúr, the owner of the crusher supplying all attendants and animals required for working it. With the best knowledge that we had at our disposal, we calculated for assessment purposes that the average net profits of sugarcane per acre were Rs. 53. An intelligent zaildár and sugar-grower of Jatoí has told me that the net profits of a successful crop were Rs. 200 per acre. The Extra Assistant Settlement Officer, who is a landowner and sugar-grower, estimates the outturn at fifteen maunds of gúr per acre.

13. Moth is grown only in canal-irrigated lands, especially in the Thal. If intended for grain, moth is sown in June and July; if for fodder, it is sown in August. A single ploughing is considered enough for moth.

14. Til is sown in August, chiefly in sailábá lands. One, or at most two, ploughings are considered enough. Til ripens in November.

15. Samúká is a kharíf crop that deserves mention from the mode of its cultivation. As the rivers recede in August and September, they leave large flats of quick-sand, or rather quick-mud, which will not support a man. The sower, taking a ghará of seed, enters the mud, supporting himself on the ghará, and scatters the seed over the mud. As the mud dries, the plant springs up and produces grain in October. The grain is small and inferior. Kírás eat it on fasting-days. The straw is considered excellent fodder.

16. Wheat is grown in every part of the district. The land is ploughed seven times. On the banks of the rivers, if the alluvial deposit be friable and soft, one or two ploughings are considered enough. The fifteenth of Katik, which corresponds to the end of October, is the day for beginning to sow wheat, and sowing should be over by the fifteenth of Manghir or the end of November, though in practice it continues throughout December. Drill-sowing is preferred in the alluvial lands, and broadcast sowing, inland. The essentials for a good crop of wheat are popularly considered to be—

1. Sowing in Katik.
2. Watering in Poh.
3. Top-dressing in Manghir.

Wheat is watered from three to nine times. The number of waterings depends on the kind of soil, and on the weather. Green wheat is largely used for fodder, and while the grains are tender the ears are roasted and eaten by human beings. The name of wheat so prepared is abhú. Wheat is liable to be attacked by the following diseases or blights:—

“Dhánák.” In March and April the grains shrivel up, and become curved and black.

“Kání” or smut. The grains become black, and turn to a substance like ashes.

“Ráttí,” literally redness. The whole plant becomes yellow and shrivelled. It is said to be caused by extreme cold.

“Jhállá,” a hot westerly wind that scorches up the crop.

The weeds noxious to wheat are bhúkal, jandal, jawáuh or camel-thorn, and the thistles called lihú and kandiári. The day for beginning to reap wheat is the first of Baisákh, about April 11th. Reapers are called lailár, and their wage is láí or lávi, nominally one sheaf in every forty. But the reapers scheme to make their sheaves large, and their share is now estimated at one-twentieth of the crop. Each day's reaping is carried in the evening to the threshing-floor called píí or bhájar, and in the north khalwára, and is trodden out by oxen tied to a stake in the centre. The action of the oxen is helped by a heavy log, called phalá, being dragged by them as they move round. The cultivators rarely winnow their own wheat. They engage kurtánás, mochís and chúras to do it, and will sit still and see the corn and straw destroyed by rain rather than winnow themselves, if a winnower cannot be obtained. The heap of cleaned corn is called in the north dherí, and in the south, bár. It is divided among the various claimants, and as the cultivator has postponed paying his bills till harvest time, appropriately uses the proverb,

Bár cháwan te Kíárat áwan.

Dividing a heap of corn is as bad as the Judgment Day.

17. Wheat is divided into kanjhári, or bearded, and rodé, or beardless (literally bald); and into red and white.

Kinds of wheat grown.

Other kinds are, paman: the grains are longer and thicker than any other kind. It is cultivated as a luxury, and used for parching, for making the edible called ghúngnián and vermicelli, mendhiánwáli or daúdi, the ear is small and curved. The grains are small, white and curved. It is so named because the grains being close set are supposed to resemble the plaits of a girl's hair.

18. If the sowing is early, i. e., in Katik, six pais, which equal one

Amount of seed and outturn.

maund of seed, are sown to the acre. If the sowing is late, i. e., in Manghir and Poh, eight pais, which equal one maund twelve sérs, are sown to the acre. The amount of seed is less in drill than in broadcast sowing. The outturn of wheat is from six to ten maunds per acre.

19. The cultivation of barley closely resembles that of wheat.

Barley.

In the south of the district a large-eared purplegrained species is grown which is called indargán. This is a different plant from the indargán of Stewart's Punjab Plants, page 142. It is grown as a delicacy, and is chiefly used for parching.

20. Peas are sown in sailábá land in October and November.

Peas.

One or two ploughings are considered enough. They are used as fodder, and the green pods are roasted and eaten under the name of dhadhrián and amían. When

ripe, they are used for dāl, or ground and made into bread. Peas that grow up of themselves are called pokhí. To sleep in a pea field is believed to produce a kind of paralysis called munda, and a diet of peas causes the disease known as wá. Pea bread is considered very satisfying. A quarter of a sér of pea bread will satisfy a man to the extent of inducing sleep. From 20 to 30 sérs are sown to the acre, and the outturn in grain is from three to five maunds.

21. Gram is sown in sailábá land during October. One or two ploughings are sufficient. The seed is sown broadcast. The young leaves are known as "pali." They have a pleasant acid taste, and are eaten as a vegetable. Gram ripens in April. The pods are roasted and eaten under the name of amín and dhadhrí. "Amín," plural "amian," is used in the north, "dhadhrí" in the south. Amín is said to be derived from "ham chunín-bád, may it be like this," because gram ripens first of the rabbí crops. Ten sérs are sown to the acre, and the outturn is from three to five maunds.

22. As already described under sugarcane, turnips are sown to prepare the land for a kharíf crop. The seed is sown in September, and the turnips are ripe in January. They are mostly used as fodder, and ripen just in time to relieve the failing stocks of other kinds of fodder. The leaves, stalks and roots are eaten as a vegetable, and the root is cut in pieces and dried for summer use. From the seeds is expressed a bitter oil. The plants intended to provide seed for next sowing are prepared in a peculiar way. When the plant is in its prime, the leaves are cut off two inches from the root, and the root is deeply scarified. It is then watered, and sends up a fine flower stalk. The wonder is that the plant survives such ill usage. A turnip prepared in this way for seed is called dakún gonghún. Ussún is the tárá mírā of the Punjab (*Brassica eruca*). It is sown in September. When sown alone or with másh, it is intended that the seed should ripen. When sown with peas or gram it is intended for fodder. One or two ploughings are sufficient. While green, it is eaten as a vegetable. Ussún ripens in March and April. The sheaves are collected on a piece of hard ground, and the seed thrashed out with sticks. The oil extracted from the seed is used for burning, anointing, and making sweetmeats. In very hot weather, ussún is mixed with bruised barley, and wetted and given as a cooling food to buffalos. Four sérs are sown to the acre, and the outturn is from one to two maunds. The belief that methrá seed, when sown after noon, comes up ussún, has before been mentioned. A plant of ussún is like a turnip which has gone to seed, and methrá is *Fenugreek*.

23. The other plants of the *Brassica* order cultivated in this district are arhion or ahur; mustard, (*Brassica juncea*); sarhiún, Punjabi sarron (*Brassica campestris*); sathrí, a plant of the *Brassica* order, the proper name for which I do not know. It is called sathrí because it ripens in sath (sixty) days.

24. Mohrí is *Ervum lens*, Punjabi masar and masúr. It is sown in sailábá land at the end of October. It is sown alone and with barley broadcast and in drills. If both mohrí and barley are sown broadcast, the mohrí is sown first and the barley afterwards. If drill-sowing is chosen, mohrí and barley are sown in alternate furrows. Its young leaves like gram are called palí. It ripens in April, and is made into dál. It is reckoned a humble valueless crop. A proverb on swaggerers says—

Dál mohrí dá dam puláo dá.
 "He is only mohrí dál and gives himself the airs of a puláo."

It is believed, like methra and ussún, that, under certain circumstances, mohrí turns into a weed called rári. Sixteen sérs are sown to the acre, and the outturn is four maunds.

Other rabbí crops. 25. None of the other rabbí crops require mention.

Besides agriculture there are few means of livelihood in this district. Common country cloth and blankets are woven everywhere. At Dairadinpauah good diaper is made. Chatai matting is made of the date-leaves by kirárs in every part of the district. Fair paper is made at Sitpur. In the town of Alipur is a snuff manufactory, whose snuff is largely exported to Sindh, Baháwalpur and Dera Gházi Khan.

Fishing provides an industry for a very large number of people. The fishing tribes Jhabels, Kihals and Mors live almost entirely by it, and other people take to fishing for support as well as amusement. The instruments used are—

- (1.) The drag net called chhekú jál or gháwá. This is made of several nets fastened together.
- (2.) Nará. This is a stationary net which is kept in a perpendicular position by means of floats made of reeds.
- (3.) The cast net, sátú jál.
- (4.) The kur is a beehive-shaped frame of wood, lined with a net. It is jammed to the bottom of shallow water, and secures whatever fish are inside.
- (5.) Kará is an eight-sided cage surrounded with netting.
- (6.) Sangolá, a spear like that carried by chaukidárs. This is used also for spearing tortoises.

Fish are also caught with the hook and line in deep water, and in the rivers. The other instruments are too weak for fishing in the rivers.

CHAPTER VI.—FORMER REVENUE SYSTEMS, TENURES PAST AND PRESENT. DIVISION OF CROP.

1. An account of the various governments that preceded the union of this district under Sáwan Mal has been given in Chapter II. Very little is known of their revenue system. In the Thal Nawábs' country, the revenue on all crops, except cotton and tobacco, was taken in kind. The pay of village servants, including religious dues, was set aside from the gross produce. Of the remainder, the Nawáb took one-fifth or one-sixth. A cess called tik was also taken at the following rates:—In the kharíf harvest, when the government share was one-fifth, the rate of tik was Rs. 4 on each path,* and when the share was one-sixth, tik was Rs. 2 per path. In the rabbí harvest, when the government share was one-fifth, tik was Rs. 1 per path; when the share was one-sixth, tik was Rs. 2 per path. It is difficult to understand the difference of the proportion of tik to the government share in kharíf and rabbí, but these rates are well established. Tik means the stone of a ring, and is said to have been first levied to replace the ring-stone lost by some lady-love of a Nawáb, who found the tax so convenient that he never ceased to levy it. It is not clear which of the neighbouring Nawábs first invented this device for raising his revenues. Whichever it was, they all followed suit, and the Nawábs of Baháwalpur and Mooltan also had their tik. Cotton and tobacco paid a rate per bigha, the amount of which is not known. The amount of tirni was fixed for each tract.

2. The Baháwalpur Nawábs collected their revenue in kind, plus tik and a tax on indigo called moghlá. Moghlá was in some parts a fixed rate of Rs. 5 per maund. In others it varied according to the market price, *e. g.*, when indigo sold for less than Rs. 40 per maund, the rate of moghlá was Rs. 3 per maund, when it sold above Rs. 40, moghlá was Rs. 6. All the Nawábs took zakát or transit duties, and must have levied many taxes besides, for Sáwan Mal could not have invented the innumerable cesses we shall find him collecting, and still have the reputation of being such a good ruler.

3. Much more is known of Sáwan Mal's revenue system than of that of the Nawábs. The changes effected in the system of the Nawábs by Sáwan Mal may be briefly stated as follows: He commuted the government share into cash at a price a little higher than the market price, and made the cultivators take back the government share and pay the price so fixed.

4. In describing Sáwan Mal's system, one is liable to fall into the error of stating, that any single administrative act or procedure applied to the whole district, whereas, from the want of record, the local area to which a particular act or rule extended cannot now be

*Path is a measure of grain equal in weight to about 32 maunds.

known. For instance, when we read that Sáwan Mal levied half the gross produce, and then, by manipulating the market rate, turned the half into three-quarters, and on that collected a number of cesses, took the usual dues of officials and paid them only a pittance as salary, and appropriated the customary alms, we get a total which arithmetically comes to more than the gross produce of the land, and leaves no margin of livelihood for the cultivator, who was certainly so well off, that, 35 years after, he remembers the time of Sáwan Mal with regret. The truth is, that Sáwan Mal's assessments were adjusted on a very perfect local knowledge. He began low, and gradually raised the assessment as circumstances justified it. Thus, wells in the Thal were leased at fixed sums according to their quality, but when the lessee cultivated more than the usual area attached to one well, the fixed sum was set aside, and the whole crop was bataied. If the crop was unusually good, the kárdár thought that government should share in the prosperity, and at once levied a fee called nazar mukadamí. Again, if prices rose much after the rate fixed for commuting the grain into cash, the kárdár levied a fee called shukráná, or thanks-offering. Thus the Diwán, though he had not thought of the improvement of communications, took advantage of the extension of cultivation, good seasons and the rise of prices as much as any Settlement Officer of the present day. Again, the Diwán always adhered to the ancient rate of the government share, but where it could be done, he raised the revenue by adding cesses, and at annexation it was found that where the rate of the government share was high, cesses were few; where the rate was low, cesses were many. In modern language, Sáwan Mal enhanced his revenue by means of cesses. The indiscriminate remission of these cesses, described in former settlement literature most incorrectly as "arbitrary modes of increasing the revenue by petty and vexatious dues," whereas they really made the burden uniform, was one of the causes why the first summary settlement worked so unequally. The difficulty in describing Sáwan Mal's revenue system arises from our present ignorance of the limits affected by any fiscal act. Here and there a fact or two remain, such as that moghlá was not collected in Sanánwán, or zakát in Murádábád Taluka. Cesses were numerous in Shahr Sultán, where the government share was one-sixth, and few in the neighbouring talukas of Sítpur and Dháká, where the government share was one-fourth, but enough is not known to enable us to say how each part of the district had its burden adjusted to its capacity. With this warning, an attempt may be made to describe the dealings of Sáwan Mal's government with the people.

Two classes of revenue payers.

5. Under Sáwan Mal there were two classes of revenue payers.

One class were pattadárs, or lessees who paid fixed amounts in cash for the wells cultivated by them. The amount usually varied from Rs. 12 to Rs. 24 a year, plus a nazaráná of Rs. 2 yearly. This rent was paid $\frac{2}{3}$ in kharif and $\frac{1}{3}$ in rabbi. The area attached to leased wells was from 40 to 50 bighas. If a lessee cultivated more land than was entered in his lease, the crop grown in the extra land cultivated was bataied at the rates prevailing

Pattadárs.

in the neighbourhood. If from poverty or other reason the lessee failed to cultivate his land, no remission was granted. If the lessee grew the following superior crops, indigo, sugarcane, tobacco, rice or til, batai of them was taken, and the other crops grown were considered to cover the fixed rent. Lessees of rich wells were compelled to sow one bigha of tobacco in rabbí and ten bighas of til. In the rich talukas of Muzaffargarh, Khángarh and Murádábád, if the kárdár knew the crop to be unusually good, he set aside about 100 maunds of wheat or barley in rabbí, and 25 maunds of the kharíf crop as covered by the fixed rent. He then took batai of the remainder of the rabbí crop, and took zabtí rates on the remainder of the kharíf crop. Turnips, jawár and moth were exempt from paying anything to government. In well land, methra was also exempt, but in sailábá lands, methra paid zabtí rates. On a leased well of average quality the following crops were usually grown : in kharíf, five bighas of cotton and fifteen bighas of jawár or moth ; in rabbí, twenty-five bighas of wheat, barley or gram, and five bighas of turnips. From the fact that special rules were made for the richer crops and for richer wells, and that in an average well no mention is made of the richer crops, it is probable that only isolated wells that were unassisted by canals were leased. The remarkable feature about the leased wells is the amount of interference that was permitted with the nominally fixed rent.

6. The second kind of revenue payers were those who paid a share of the crop batai, here called bháolí, and bigha rates on certain crops. The share of the crop taken by government was called mahsúl. It ranged from $\frac{1}{4}$ to $\frac{1}{2}$ of the gross crop. There is no information to show how this share was originally fixed. Sáwan Mal seems to have adopted the share fixed from time immemorial, and to have equalized and increased it by means of cesses. Accordingly at annexation it was found that in those tracts where the mahsúl was high, cesses were few, and where it was low, cesses were many. An account of the cesses will be given hereafter. In the parts of this district near Mooltan city the mahsúl was usually taken in kind, because grain was required for the troops and the court. In the rest of the district the mahsúl was returned to the cultivators, who were obliged to buy it from government at a rate which was usually 25 per cent. above the market price. The following crops paid the bigha rates entered opposite each. This mode of paying revenue was called zabtí.

Kharíf crops.

Rawánh	...	...	Re. 1-0 per bigha.
Jawár grown for fodder	...	...	" 1-0 "
Chilies	...	...	Rs. 4-0 "

Rabbí crops.

Methra	...	...	As. 10 to As. 12 per bigha.
Peas	...	...	Re. 1-0 per bigha.
Green wheat used as fodder	...	...	" 1-0 "
Tobacco	...	...	Rs. 4 to Rs. 5-0 "
Saffron	...	...	Rs. 4-0 "

7. As already stated, cesses were extremely numerous, and were used as a means of equalizing the mahsúl, and of enhancing the revenue where opportunity offered. The cesses levied by Sáwan Mal have more than an antiquarian interest, because they are the form in which powerful proprietors now attempt to extort from tenants a rent higher than that fixed by custom or agreement. These cesses were taken either by government or by officials, and in no way formed part of the proprietor's dues. Proprietors now constantly include such demands in civil suits, and they have occasionally been decreed by courts which were ignorant of their origin. Every attempt to levy them should be strenuously resisted by the courts. Fines for criminal offences were always levied at harvests, and it is often difficult to distinguish between a cess and a fine. The following were the most common cesses. After them the fines are given: They are interesting as showing what offences formed Sáwan Mal's Penal Code. The cesses called *nazar mukadamí* and *shukráná* have been already mentioned. The others were :—

1. *Nazar Muharir*, also called *páo mani*. This was a quarter of a *ser* per maund on all crops, and was levied when the crop was weighed. The cess was of long standing. Sáwan Mal confiscated it and credited it to government.
2. *Faroí Karáwá* (" *faroí*," anything extra or beyond the regular receipts, and " *karáwá*," a field watchman) consisted of fines on cattle trespassing, levied by the watchmen engaged to watch the crop while ripening.
3. *Nazaráná* paid to officials, *e. g.*, presents made to *muharrirs* on beginning the division of a field ; a horse or a camel from holders of revenue-free wells, or wells held on favorable terms, a small *nazar* on *máfi* wells in order that there might be some record of them in the accounts. *Nazars* were taken on various pretexts, generally for the nominal pay of government servants, but really to increase the revenue. *Nazars* were strictly credited to government, but embezzlements took place.
4. *Dumbirí*, the pay of the persons who weighed the crop. This ranged from $\frac{1}{4}$ to 1 *ser* per maund. Besides they took whatever the cultivators would give them (*jholí*). Government took half of this cess, and half went to the weighmen.
5. *Muhassalí* was nominally levied for the pay of the field watchmen during the ripening and harvesting of the crop. Government took half the *muhassalí* and half went to the watchmen.
6. *Bhárá*, or carriage hire. The cultivators were bound to convey the government share of produce to the government stores. Sometimes a cess was levied to represent

10. The government also claimed from one-third to one-sixth of all fish caught in the rivers, lakes and ponds. Revenue from fisheries, The government share was commuted to money, and the fishermen were obliged to buy the government share at the price fixed.

11. Transit duties (zakát) and town duties (chungí and dharath) were levied. Nothing is known of the rates or amount of this kind of revenue. Town and transit duties,

12. The cutting of pipal and bohar trees was entirely forbidden Revenue from trees, especially dates, out of respect for the scruples of the Hindus. All other trees were absolutely the property of government. If a person wanted a "táhlí" tree, he was obliged to obtain a personal interview with Sáwan Mal and make his request. If it was granted, Sáwan Mal issued a written order to assess the value of the tree, and the price was paid before leave to cut the tree was given. Leave could be obtained from the kárdár to cut bér, kikar or siris trees on payment of from 8 annas to Re. 1. But the largest revenue was derived from date trees, and the most stringent regulations existed regarding them. Government claimed all date trees wherever grown, and the owners of land could no more cut date than táhlí trees. Each year in the month of Háth (June-July), an appraisement of the crop was made and the estimated weight recorded. The crop was then sold at a fixed price to brokers called baikhars (from bai, selling, and kharídan, to buy). The "baikhars" were not the owners of the land in which the trees grew. They were usually persons who had bought the dates for many consecutive years, and were seldom changed. A change was possible if a higher bid was offered, but in practice was rarely made. After the crop had been appraised, the responsibility of watching it till ripe fell on the baikhars, and an allowance was made to cover the expense of watching. The price of the dates was rigorously exacted from the baikhars, and a baikhar of some standing could, with the greatest difficulty, get rid of the responsibility of buying the appraised crop at the fixed price. Rain and a fall of prices were most dreaded by the baikhars, but no remissions were ever given. Instances are known of their leaving the country and of their attempting to commit suicide, in order to escape the severity with which they were held to their contract. It is said that in early times the land-owners used to get one-fourth of the crop, but of late years Sáwan Mal had taken possession of the whole.

13. The revenue system above described was in full work at annexation. The Mooltan governor was taking Changes of administration on annexation, mahsúl in cash or kind, plus cesses. He took the whole of the date crop, and was absolute proprietor of all trees. He levied a poll tax on artisans, camels, female buffaloes, sheep and goats. He also levied transit and town duties. At annexation, all cesses were abolished. The proprietorship of the dates was conferred on the owners of land, and a very low cash assessment made on the female trees. The ownership of other trees was surrendered to the land-owners. Tirní on artisans, and transit and

town duties were abolished. The tax on camels, female buffaloes, sheep and goats was maintained. The mahsúl was converted into a cash assessment in the following way: "The average payments for three years were converted into money at the market prices with a reduction of 10, 15 or 20 per cent., according to the state of the country."

14. The average income of the preceding three years was as follows for two tahsils:—

				Rs.
Muzaffargarh	...	...	...	3,46,287
Alipur	...	...	...	2,22,245

We unfortunately have not the income of the Sanánwán Tahsíl, which after annexation belonged to the Leiah District. The district was settled and the settlement reported according to the old talukas, of which there were 24 in the district. Captain Hollings, Deputy Commissioner of Leiah, settled the whole of the Sanánwán Tahsíl. Mr. Wedderburn, Lieutenant Farrington and Lieutenant James settled the rest of the district. The following was the result:—

				Rs.
Muzaffargarh	...	...	...	2,57,589
Alipur	...	...	...	1,82,737
Sanánwán	...	...	...	1,44,814
Total				<u>5,85,140</u>

This settlement worked very badly. The indiscriminate remission of leases made it unequal. The cultivators did not know how to manage for themselves. They had been used to rely on the kárdárs for arranging all details of agriculture, and this support was suddenly withdrawn. Even the great concession of ownership in the date trees was misunderstood. The people went in crowds to petition the Board of Administration. Their complaints were, that the system was new, that they could not arrange for watching the fruit, and that they did not know how to distribute the assessment among themselves. Then a great fall in prices took place. The Sikh collections were commuted to money at Re. 1-8 a maund for wheat. Immediately after, the settlement prices fell to 10 annas and 12 annas per maund. Dates before annexation sold at Rs. 2-8 per maund. In 1851 the price was Re. 1-12. The district correspondence between 1850 and 1857 reads as if there was continued famine in the district, while at the same time magnificent harvests are reported. During these years revenue defaulters were in jail for three months or more. Lambardárs threw down their pattas in court and clamoured for reduction. Proposals were made to sell villages for arrears of revenue. Reductions and remissions were largely given. The Deputy Commissioners reported on the general severity of the jama and suggested revision. The number of transfers of land attracted the attention of the Financial Commissioner, who was "convinced that the transfer arose from undue

pressure of the Government demand." It was during the first summary settlement, in the year 1855, that the demarcation of village boundaries was made by Mír Roshan Ali, Superintendent of Settlement. This was followed in 1856 and 1857 by the revenue survey.

15. The second summary settlement began in 1854. Mr. D. The second summary settle- Simson, Deputy Commissioner of Leiah, re- ment. visied the jama of the Sanánwán Tahsíl which then belonged to the Leiah District. He granted a remission of 10½ per cent., and fixed the jama at Rs. 1,29,780. In 1857 Captain Graham revised the jamas of the Muzaffargarh and Alipur Tahsils. He raised the jama 6 and 21 per cent. respectively. The action of the Settlement Officer in increasing a jama already too high seems to us now incomprehensible, but the reasons for it are to be gathered from the correspondence. The year 1857 was unusually favorable. The rainfall was good. The rivers rose well and seasonably, and there was an abundant supply of water in the canals. The mutiny was going on in Hindustan and there had been risings in Mooltan and Gugaira. The favorable seasons induced the Settlement Officer* to fix his jamas too high, and the fear of being thought disloyal induced the land-owners to accept jamas which at other times they would not have looked at. But even Mr. Simson's jama in Sanánwán was felt to be severe. The Deputy Commissioner in April 1860 retorted that that tahsíl was "really suffering under a too heavy and badly distributed assessment. In Alipur and Muzaffargarh the settlement, as might have been expected, broke down in a year and a half. The Lieutenant Governor, when sanctioning the revision, wrote that a perusal of the report has convinced the Lieutenant Governor that instead of being increased, the jama ought to have been largely reduced."

16. The third summary settlement was made by Lieutenant Tighe for the whole district. By this time the Sanánwán Tahsíl had been added to the district. His assessments for each tahsíl were as follows :—

					Rs.
Muzaffargarh	...	...	...	...	2,20,592
Alipur	...	...	...	...	1,41,042
Sanánwán	...	...	...	...	1,08,660

In Sanánwán a substantial reduction was again made. In Alipur the result of this revision was to put back the jama to the amount at which it stood before Captain Graham's revision. In Muzaffargarh a substantial reduction was given on the jama of the first summary settlement. This revision was followed by the first distribution of the jama and preparation of khewats that had been made in the district. This work was done by Sohan Lál, Extra Assistant Commissioner, and is known as the khewat of 1923 Sambat. The third summary settlement would have worked well but for three things. The inundation-canals irrigate

* Deputy Commissioner's No. 556, dated 8th July 1859.

210,000 acres of cultivation. The best crops depend on them. Our immediate predecessors paid the closest attention to the canal arrangements. From annexation to 1876 the clearance and repairs of the canals were wholly neglected. The result was that the cultivators were impoverished and the revenue has suffered. In round numbers 120,000 acres of cultivation are dependent on sailab. Enhancements were largely made on account of river action, but remissions were sparingly given for deterioration from the same cause. In short, the revenue administration in the canal and in the sailab country, which form nine-tenths of the cultivation of the district, was about as bad as it could be. This management has been now corrected permanently, and only requires to be noticed here. Illegal and unreported methods of coercion were generally practised, and the result has been to make the people as bad revenue payers as the tahsildárs bad collectors. The mode of collection shall be closely watched, for the tahsildárs show signs already of reverting to their own illegal practices. Another fault was, that no official ever understood that a new distribution of the revenue could be made. The working of the third summary settlement showed that the district was one that required more active revenue administration than most, and that neglect would produce very disastrous results. A local disaster was the series of destructive floods that occurred from 1871 to 1874 in the Sanánwán Tahsíl. The regular settlement of the district began in 1873. An account of it will be given in the next chapter.

17. The tenures of the district are so inseparably connected with the former revenue administration that an account of them suitably follows here. The mutual relations of the classes living on the land have been formed by the revenue system of the Sikhs and British. The system has not adapted itself to the existing state of things, but has distinctly and abruptly interfered with it. At the head of the agricultural system is a large body of what are now called superior proprietors. Most of these are the descendants of tribes who came here for grazing at a time when the country was depopulated. With or without the leave of the Government of the time being, they occupied tracts, the boundaries of which were not very clearly defined. Of this kind are the Tháúms near Muzaffargarh, the Parihárs of Kot Adú, the Khars of the Thal, the Chajráas and Damars in Alipur, and other tribes still occupying distinct tracts of country. Other superior proprietors are the descendants of jagírdárs and former governors or officials who lost their position in troubled times, but were able to retain a right to a small grain fee in the tract over which they once exercised power. Others are the descendants of Makhidúns and other holy men who formerly held land free of revenue, but whose rights have been circumscribed by successive governments. The superior proprietors above described were from the first in the habit of introducing settlers to till the lands, but the great development of the settler class was due to Diwán Sáwan Mal. When he took the farm of the revenues of this district from Ranjit Singh, he saw at once that cultivation could not be restored or increased by the representatives of former governors, holy men, broken down jagírdárs, and loosely connected tribes whom he found in nominal

possession of the lands. He therefore encouraged strangers and Hindu capitalists to sink wells, dig canals, and cultivate the lands of the nominal owners. At the same time he secured to the latter a share of the produce, generally half a sér in each maund by weight, or one pai* in each path where the crops were divided by measure. In some cases the old proprietors were strong enough to levy an institution fee, when a settler was located on their lands. In this way two distinct classes of proprietors were formed :—

(1.) The old possessors who were known as zamíndárs and mukadám, and in modern official language Malikán Alá and Talukdárs.

(2.) The settlers, formerly called riáyá, and chakdárs, and now generally Malikán Adná. The chakdár was so called from the wooden frame on which the masonry cylinder of a well is built. The name was meant to express that the chakdár had acquired his rights in the land by his having sunk the well. For this reason he was also called the silhdár or owner of the bricks of the well.

The superior proprietors claim to be owners of all unappropriated land, and entitled to a small share of the crop produced in the appropriated land. The Malikán Adná are full proprietors of the land in possession, subject to the payment of the share of the old proprietors, and are not liable to eviction on failure to pay it, and are entitled to introduce tenants without reference to the superior proprietors. Since annexation the fortune of the superior proprietors have varied. In some villages the tenure has disappeared. In others, especially where little unappropriated land was left, the lambardárship, which was a novelty, took the place of the superior proprietary right. In Sanánwán the tenure survives in every village, because a record of the superior proprietary right was made and the grain fee was commuted into money at the rate of Rs. 1-12-0 per cent. on the land-revenue. In Muzaffargarh and Alipur no such arrangement was made, and the tenure has disappeared in the majority of villages. In Muzaffargarh there are 411 villages. In 139 there are both superior and inferior proprietors. In 272, superior proprietorship has disappeared, and the inferior proprietors have become absolute. In Alipur there are 177 villages. Superior proprietorship has survived in 48 only. The superior proprietors, as such, have no right to interfere in the management or the cultivation of the appropriated lands of a village. The settlement has in no case been made with them, except where they are also inferior proprietors. Their rights are restricted to receiving their fee in grain or cash, and to disposing of the unappropriated waste in the village. The name of the superior proprietary right is zamíndarí, mukadamí, or milkiyat álá. The share of the produce is "hak zamíndarí," hak mukadamí and malikáná, or more often the specific rate at which the share is fixed, *e. g.*, adh-sérá man and pai path are used instead of the generic word. In Sanánwán it is called satán pawán, or the seven quarters of a rupee which equal Re. 1-12-0, the rate at which it is paid. The institution fee is called jhúrí sar-o-pa pag and lungí.

18. One set of superior proprietors was formed by the direct action of the British Government. They are the persons known here as the Mooltani Patháns.

* A pai is a measure of grain containing about 16 seers by weight. A path is a measure equal to about 32 maunds. 64 pais make a path.

Under the Afghán governors of Mooltan a number of Patháns had settled in this district. They enjoyed grain allowances which were given as a deduction* from the mahsúl or government share of the produce. When the Sikhs in 1818 took Mooltan, the Patháns fled the country. In 1848 they joined Major Edwardes and rendered services in his operations against Mulráj. When the country had become quiet, the Patháns claimed restoration. The rules of limitation were set aside in their favor, and with its letter No. 1975, dated 30th September 1850, the Board of Administration prescribed rules "for the regulation of the trial of suits instituted by the Patháns of Mooltan for the recovery of their ancestral rights," of which the following is an extract:—

Rule 2. "To establish the right of a party to sue, irrespective of the Statute of Limitation on the merits of his claim to re-possession of zamindári property, he must prove that he was a Mooltani Pathán present with Major Edwardes' force, or that he is a member of a family of Mooltani Patháns some of the members of which family were present with Major Edwardes' force."

In pursuance of these rules, cases continued to be heard up to December 1852, and Patháns obtained decrees for kasúr in the villages of Jalálábád, Piplí, Ran, Kangan, Mahrá Faráz, Wáfárápúr, Mahra Nasheli, Ghazanfargarh, Doábá, Jarh, Latukran, Langar Sarai and Lálpúr. The measure can only be considered disastrous. It was not observed at the time that under the Pathán governors this kasúr was paid as a deduction from the revenue, and that if the Patháns were to be restored under the altered state of things brought about by a cash assessment, the more just method was to have given them an allowance from the revenue and not to have imposed a new grain-cess on the cultivators. In 1853 the Deputy Commissioner reported that the exercise of the rights of the Patháns who recovered kasúr paralyzed the industry of the cultivators, and again in 1859 he said that the restoration of the Patháns to kasúr rights was impolitic. The failure to define those rights has allowed them to encroach on the inferior proprietors and to ruin them. He instanced villages that had been ruined in this manner. The result was, that in some villages the Patháns succeeded in ousting altogether the inferior proprietors; in others they reduced them to the position of tenants-at-will. Where the inferior proprietors were too strong to be interfered with, beyond the enforced payment of kasúr, the Patháns became superior proprietors.

19. The way in which the status of inferior proprietor was formed has been described. The inferior proprietors in a village have usually no common ties of clanship. They are a miscellaneous body, each member of which was originally introduced either by the government or by the superior proprietors. In villages where superior proprietary right exists, the inferior proprietor is usually entitled only to the land occupied by himself or his tenants. The unappropriated waste belongs to the superior proprietors. The inferior can graze his cattle in it, subject to the *timní*

*NOTE.—This deduction was called "kasúr," which, it should be noted, is different from the "kasúr" which is also the name for the particular rent of the inferior proprietors.

rules, but cannot cultivate it without leave of the superior. In other respects tenure of inferior and absolute proprietors differs only in that as regards the latter the superior right has ceased to exist. The formation of new superior proprietorship where it has ceased to exist has of course long been impossible, but new inferior and absolute proprietors are constantly being made by the contract known here as *adh-lapí* or *adlopí*. A proprietor allows a third person to sink a well in his land on payment of a fee, and to bring the land under cultivation. The person so sinking the well becomes proprietor of half the land brought under cultivation. If an inferior proprietor cultivate through tenants, he receives a grain fee which is called "*liehh*" on the Indus, and "*kasúr*" on the Chenab. The rate varies with locality and in consequence of contract, but it is almost invariably one-seventeenth of the gross produce and is known as *solh satáí*. Under former governments the share taken by the State was the *mahsúl*. Under our Government the person who pays the land-revenue receives the *mahsúl*. This person may be by agreement the superior proprietor or the tenant, or even some person unconnected with the land, but as a rule the inferior proprietor pays the land-revenue and receives the *mahsúl*. For the purposes of settlement he has been presumed always to pay the land-revenue and to receive the *mahsúl*, and his profits have been assumed to be the *mahsúl*, plus the *liehh* or *kasúr*.

20. From the mode in which inferior proprietorship was formed, *viz.*, by settling individuals to till the land, it follows that most villages are mere collections of wells grouped together for revenue purposes, but not really knit together in any way. When they are classified according to the usual nomenclature, the following is the result :—

Tahsil.	Zamindári.	Pattidári.	Bhayáchará.
Muzaffargarh	30	9	378
Alipur	8	1	167
Sanánwán	27	1	110
Total ...	65	11	655

Tenants.

21. The tenants in this district are chiefly of two classes—

(1.) Those who have, by clearing the jungle and by bringing land under cultivation, acquired a permanent right to cultivate. These are called *Mundhímár* or *Bútímár*, and have as a rule been recorded at regular settlement as tenants with rights of occupancy.

Mundhímár tenants.
Bútímár tenants.

- (2.) Those tenants who have been put in, with or without a term being fixed by proprietors, to cultivate land already cleared and fit for crops. These are called *charháyat*. They have been usually recorded as tenants without rights of occupancy. Tenants were classified according to the language of the Tenancy Act. Land is still so abundant that the occupancy status has no attraction for tenants. They prefer not to be tied to the land, and to be able to change their cultivation when they like. In the Sanánwán Tahsíl, applications by tenants not to be recorded as having rights of occupancy were common, though they were by custom entitled to permanent possession. The share of the crop received by the tenant is called "*rahkám*." Tenants are eagerly sought after, and as a rule free from any attempt on the part of the landlord to extort from them. Every effort is made to retain them. Some landlords study to get their tenants indebted to them in order to keep a hold on them.

22. In addition to the usual forms of superior and inferior proprietor, and *mundhímár*, *bútímár* and *charháyat* tenant with their respective shares in the produce, there are certain exceptional forms of agricultural status, rent and interest or mortgages, which require to be described.

It often occurs that an inferior proprietor, from indolence, or inability to keep accounts and manage for himself, agrees with some third person, usually a village shopkeeper, that the latter shall receive the *mahsúl*, pay the Government revenue out of it, and keep the profit or bear the loss. Such a person is called a *mahsúlkhor*. This arrangement was very common before the regular settlement, and still exists.

Lichháín means a cultivator who tills his land with borrowed bullocks, and pays the owner of the bullocks half of the *rahkám*, or cultivator's share.

Anwahndá literally means "without working." Hence it means that share of the produce which a person connected with land receives without working, or foregoes because he has not done work which by custom was incumbent on him, *e. g.*, A lends B money, and instead of getting interest in cash, receives a share in the produce. That share is called *anwahndá*, because A gets it without working for it. When a landlord has cleared the jungle and brought land under cultivation himself, and then gives it to a tenant to cultivate, he takes an extra share of the produce, because he has himself done the work which the tenant should have done. This share is called *anwahndá*, because the tenant did not do the work of clearing. The word *anwahndá* of itself has no meaning without the history of the manner in which it accrued. When a suit is brought for

anwahndá without details, it should always be returned to the plaintiff in order that the grounds on which it is claimed may be entered in the plaint. Until this is done the plaint discloses no cause of action.

Lieh in its ordinary sense means the due of the inferior proprietor, and is synonymous with *kasúr* as already described. But *lieh* also means the interest due on a mortgage of land when the mortgagor continues in cultivating possession, whether it be paid in grain or cash. Another kind of *lieh* is *valwín lieh*, i.e., "returned *lieh*," which is also called *khutí*. When land is mortgaged to a Muhammadan, and the conditions of the mortgage are that the mortgagee shall cultivate the land, he agrees to pay a small share of the produce to the mortgagor. This share is called *valwín lieh* or *khutí*. The use of *lieh* to mean interest, and the practice of *valwín lieh*, are devices of Muhammadans to evade the charge of receiving interest, and are now in vogue among Hindus as well.

Lekhá mukhí is the name of a kind of usufructuary mortgage in use. A debtor makes over his land to a creditor until the debt is paid from the produce of the land, or the debtor retains the cultivation and agrees to pay the proprietor's share to the creditor. In both cases the creditor charges the interest of the debt and expenses against the debtor, and credits him with the produce of the land or with the proprietor's share, until the debt is liquidated.

CHAPTER VII.—THE SETTLEMENT.

1. The settlement began in the hot weather of 1873. Notification 683, dated 5th May 1873, issued under section 11, Act XXXIII of 1871, declared the district to be under settlement. Mr. E. O'Brien was appointed Settlement Officer; Mir Nisár Ali, Extra Assistant Settlement Officer; and Kázi Ghulam Murtázá, Sheikh Subah and Munshí Bhagwán Dás, Superintendents of Settlement in Alipur, Muzaffargarh and Sanánwán, respectively. Mr. E. O'Brien was gazetted a Magistrate of the 1st class by Notification 1704, dated 1st May 1874. Mir Nisár Ali was transferred, and Kázi Ghulam Murtázá was appointed Extra Assistant Settlement Officer by Notification 3532, dated 24th September 1875, and was made a Magistrate of the 2nd class by Notification 4607, dated 9th December 1875. By Notification 1042, dated 9th July 1873, Mr. E. O'Brien was invested with the powers of a Deputy Commissioner for the appointment, punishment and removal of patwáris and kanúgos. By Notification 26, dated 6th January 1880, the record of rights for Sanánwán was directed to be handed over to the Deputy Commissioner, and

by Notification 954, dated 4th October 1880, similar orders were passed for Alipur and Muzaffargarh Tahsils. Establishments were collected, and the patwáris trained only in time to make a thorough start in September 1873. Measurements were completed in the three tahsils from March to June 1875. The reports on assessment rates were submitted and sanctioned on the following dates :—

Tahsil.			Date of submission.	Date of sanction.
Sanánwán	...	...	2nd February 1877	27th June 1878.
Alipur	...	...	17th September 1877	18th June 1879.
Muzaffargarh	...	...	15th July 1878	27th September 1879.

The settlement was finished in July 1880, thus taking as nearly as possible seven years.

2. The scale of linear and square measure on which the measurements were made is that in use in the district, and is a convenient one, because it corresponds with the English measures.
- The measurements and their results.

Linear Measure.—2 paces ($5\frac{1}{2}$ feet) make 1 karam, 12 karams make 1 jarib. A karam square is sarsáhi, which gives the unit of the local square measure.

Square Measure.—9 sarsáhis = 1 murla = 1 pole. 20 murlas = 1 kanal = $\frac{1}{2}$ rood. 4 kanals = 1 bigha = $\frac{1}{2}$ acre.

It was soon seen that the classification of land for assessment purposes in this rainless district must be based on the different kinds of irrigation, and not on soils. Though the latter vary in fertility, still the great salient differences in productive power depend on the modes of irrigation. Thus the large area dependent on the river inundation produces only one crop in the year, and that a rabbi crop. The land irrigated by canals alone produces only one crop, and that a kharif crop. The land irrigated from wells assisted by canals can grow two crops in the year, and those of the richest quality, or such crops as sugarcane and cotton which occupy the ground during both seasons. The classification adopted was therefore as follows:—

- (1). Land irrigated by sailáb.
- (2). Land irrigated by sailáb and well (chahi sailábá).
- (3). Land irrigated by well and canal (chahi nahri).
- (4). Land irrigated by well alone (chahi).
- (5). Land irrigated by canal flow (paggu).
- (6). Land irrigated by canal lift (jhalári).

The cultivated area of the district according to the settlement measurements is as follows :—

Tahsil.			Artificially irrigated by well or canal.	Irrigated by saibab.	Total.
			Aeres	Aeres	Aeres
Muzaffargarh	...	...	126,709	43,477	170,186
Altipur	...	...	71,652	49,660	121,312
Sansauwán	...	...	82,210	25,559	107,769
Total			280,571	118,696	399,267

The culturable waste is 952,870 acres. The area recently thrown out of cultivation is 61,842, and unculturable waste 281,725, acres. The measurements were the most interesting part of the settlement, and were, I think, very correctly done. The patwáris had been well trained during the hot weather of 1873. A reserve was formed by starting surveying classes at the larger schools from which a constant supply of residents of the district were ready to take the place of incapacitated patwáris. Sons of some of the lambardárs and zaildárs joined the classes and acquired enough knowledge to be useful to them after the settlement, when annual measurements of the whole cultivated area of the district have become part of the revenue administration. The superintendents were active in checking the survey, and had not become wearied by office work.

3. As a part of the measurements, the Government rakhs were demarcated, and what had been a sore question since 1860 was finally decided. The demarca-

Rakh demarcation.

tion of village boundaries was made, as has been stated, in 1856. It included within village boundaries all the waste land in the district. In 1860, Mr. Cust, then Financial Commissioner, in his letter No. 3342, dated 24th July, declared the boundaries open to revision. In 1861, in order to carry out this order, the Deputy Commissioner with a pencil marked off, on the revenue survey maps, pieces of land shown as waste, to form Government rakhs; but no demarcation on the spot was made till 1879, when Sohan Lal, Extra Assistant Commissioner, was appointed to carry out the work. This demarcation followed rigidly the pencil lines of 1861, and the result was that much cultivated land, pukka wells, village sites, graveyards, public roads, and even canals, were included in the rakhs. In 1874 a re-demarcation was ordered. This has been carried out, and sanction was received to it in the correspondence noted in the margin. The area of rakh land is 311,554 acres. The

Secretary to Government No. 948, dated 20th August 1877, to Secretary to Financial Commissioner; and Secretary to Government No. 655, dated 1st June 1878, to ditto.

property of Government, No claims to rights of entry on the retained

Government rights in these have been secured, in almost every case, unincumbered by the inclusion of popular rights. The rakhs have been excluded from village boundaries and made into new rakh villages. A regular settlement record has been made for each rakh, the

rakh, for any purpose except a few old rights of way, were either made or admitted. Where rights of way existed, the roads have been shown on the rakh shajra, and have been mentioned in the wajib-ul-arz. If the road was a main road, and the right of way public, this has been recorded, and if the right of way was restricted, the persons entitled to use it have been mentioned.

4. Besides the settlement record of each rakh, a record has been prepared of the kind described in the correspondence attached to Financial Commissioner's Circular memo. S of 1876, for each of the rakhs under the control of the Forest Department, and forwarded to the Assistant Conservator of Forests, Mooltan. Trenches and boundary pillars have been made round all the rakhs. At the point where a rakh and two or more other villages meet, the usual trijunctional platforms have been erected. The records above referred to were prepared in accordance with departmental orders before the passing of the Forest Act. If it is thought necessary to go over the ground again in accordance with the procedure laid down in that Act, they will form a good guide for the Forest Settlement Officer. Draft rules for the future management of the rakhs under the control of the Deputy Commissioner were submitted with my letter No. 134, dated 13th September 1879, to Settlement Commissioner, but no orders have yet been received on the subject.

5. Before the re-demarcation of rakhs, tirni was levied in those villages in which rakhs existed. Those villages in which there was no rakh escaped paying anything for their cattle. At the regular settlement, all village waste, including of course released rakhs, was assessed for the term of settlement with a fixed assessment as grazing land, and it was arranged in the draft rules referred to before that the grazing in the retained rakhs should be leased annually. Under the former system, the tirni income from rakhs had varied from Rs. 23,888 to Rs. 43,124. Under the arrangements made at the regular settlement the grazing land of the district has been assessed as follows:—

			Rs.
Muzaffargarh	...	...	9,488
Alipur	...	...	14,420
Sanánwán	...	...	9,480
Total	...	...	33,388

In 1880-81 the grazing in the rakhs under the control of the Deputy Commissioner sold for Rs. 3,491.

6. There is a large area of rakh land under the Forest Department. Since 1870 the officers of that department have been making selections of rakhs to be managed under their control, but no final

decision has been reached at present (1881). The following is the area of rakhs under the

				Acres.
Forest Department	...	...	...	... 48,787
District authorities	...	...	...	... 262,767
		Total		... 311,554

7. Under former Governments the annual clearance and repairs

Canal administrations, past and present.

were usually effected by levying so many laborers per well or per yoke of oxen. Fifty or sixty bighas of waste land were considered equal to a well for the purposes of this levy. When the work was unusually heavy, the irrigators subscribed cash to engage hired laborers. Occasionally the Government of the day gave money assistance for the execution of works, and recouped itself by levying a share of the crop at harvest. Under the Baháwalpur Government a cess of one pai of grain per path was levied for clearance and excavation of the canals. Under Sáwan Mal, grants of money were made to assist the excavation and clearance. The kardars were responsible for the work being efficiently done. They had unlimited powers, and compelled attendance of the laborers by force, and punished shirkers. Under their administration the irrigators rarely failed to supply the required amount of labor. Judging from old accounts, from the greater extent of canal cultivation, from the number of disused canals, and from the diminished length of the remaining canals, the canal administration under former Governments was closely supervised, and especially under Sáwan Mal was very effective.

8. From annexation to 1857 the administration of the canals

Canal administration under British rule.

may be described as absolute neglect. The old system of active interference on the part of Government was withdrawn, and the canals were left to get on as best they could. In 1858, Mr. Henderson, Deputy Commissioner, laid down an efficient scheme of canal management, which, with few changes, has stood its ground to this day. Its author, however, did not contemplate with what inertness it would occasionally be worked. A record of facts regarding each canal was prepared. The responsibility of the irrigators for supplying labor for the annual clearance and repairs was asserted and enforced by the imposition of a fine on those persons who absented themselves from the work. The fine was first 2 annas per head per day, then progressively 4, 6, 8 and 12 annas. In 1874 it was reduced to 8 annas, at which it still remains. On each canal a committee of management, the members of which were called sarpanches, was chosen from among the irrigators, and one or more water-bailiffs, called mimhars, were appointed. Their duties were to summon the laborers for the clearance, and to distribute the water when the canals were running. A darogha was appointed for each tahsil, and paid from the absentees' fine fund. The sarpanches were remunerated by the remission of part of the quota of labor which they were bound to supply. The mimhars were paid by the

irrigators. The mode of payment differed. On some canals they received from Rs. 5 to Rs. 7 per month in cash; and two topas = 8 sérs of grain per well at harvest. On others they received four or five topas per well at harvest, and no cash allowance. The procedure for effecting the annual clearance and repairs was as follows. Each year when the canals ceased to run, the sarpanches and mimhars, with the darogha, inspected each canal. They decided how many laborers were wanted for the clearance, and how long the work would take, and then submitted a petition through the tahsildár, saying that they wished to supply so many laborers for such and such a period. When the Deputy Commissioner's sanction had been obtained, a muharir and one or more chaprásís were appointed for each canal, and the number of laborers fixed on for the canal was distributed in proportion to the land-revenue paid by each irrigator, so that each person knew the number of laborers that he had to supply. Then a proclamation, vakará, was issued by the tahsildár through the sarpanches, fixing the date for the clearance to begin, which was generally in December. The clearance was done in two ways. All the laborers began at one end of the canal and worked through to the other. This mode is called súrh. The other mode is as follows: The canal was divided into lengths, and each village cleared the length allotted to it. This mode is called dak. During the clearance the muharir kept up a roster of the laborers present and absent, and at the end of the work each irrigator who had not supplied his quota of laborers was debited with the number of laborers which he had not supplied at the rate of fine which was then current. The fines, as well as income from the sale of grass and wood from the canal banks, were credited to a fund devoted to the general improvement of the canals. The fines and the fund are termed zar-i-nagha, or, in common parlance, nángá. A gang of laborers is called chher, which also means a drove of cattle, and each member of the gang is called a chherá. If, while the canals were running, any emergent work was required to be done, such as mending the bank which had burst, or clearing the head which had silted up, additional laborers were called out. Such laborers are called the chikar chher, or "mud gang," because they have to work at a time when the clay has been turned into mud by the canal water. It speaks well for the readiness with which the people are ready to help one another that it is not found necessary to levy zar-i-nagha to ensure attendance at the chikar chher. From 1858 to 1878 a person wishing to obtain irrigation for land that had not hitherto received it, or to cease to receive canal water, had to obtain special permission, which was only granted after inquiry. In practice, it was easy enough to be brought on the roll of irrigators, but almost impossible to get removed from it, and, consequently, from the obligation to supply labor. One of the worst abuses connected with the management of the canals was, that men were kept on the labor list for years after they had ceased to obtain water, and this though the failure of water arose from causes beyond their control. In 1878 this system was changed, the irrigated area was measured, and the number of laborers distributed over the irrigated area only. The theory that the labor was supplied voluntarily was

strictly kept up, and no active tahsildár could get the annual clearance done, or any work of improvement effected, until he had got a voluntary petition from the irrigators to be allowed to supply so many laborers. The tahsildár was full of zeal, and wanted to get great works done and make a name for himself. He also knew that unless the canals were well cleared he would find it difficult to collect his revenue, and so would get into trouble. On the other hand, the irrigators were improvident beyond description, and did their best to avoid supplying labor, and amusing contests between these rival wishes occurred. It is even said that in darker days the committee of management was locked up until it agreed to satisfy the tahsildárs' requirements as regards labor. Mr. Henderson's system started well, but it was badly worked. The Deputy Commissioners and the tahsildárs had not the time or the knowledge to manage canals, which got worse and worse. They were not fully or regularly cleared out, and consequently decreased in width, depth and length. The level of their beds having thus become higher, the supply of water was prevented from entering the canals as early, and from continuing to flow as long, as when they were well cleared. In 1876, when the canals had reached their worst, improvements began to be made. A tahsildár was specially appointed to look after the canals, and as much as was possible without professional help was done in the way of reforms. In March 1880 Government sanctioned the formation of the Muzaffargarh canals into a Public Works Division; Mr. E. A. Sibold, C. E., was appointed Executive Engineer.

9. It only remains to describe the arrangements made for the future management of the canals by the Revenue and Canal officers. The number of laborers required to execute the annual clearance and repairs has been fixed for the next five years. The obligation to provide the number of laborers fixed has been made part of the settlement of land revenue, and is recorded in the administration paper of each canal village. The penalty for non-attendance has been fixed at 8 annas per man per day, and has also been recorded. Every year in August and September the canal-irrigated land will be measured by the patwáris, and the results will be communicated to the Executive Engineer in the following form:—

Abstract Statement (Khatawar) of Canal-irrigated land for S. P. 1287 in Mauza.

1	2	3	4	5	6	7	8	9	10	11	12	13
Girdawari Number.	Name of well or jhalak or patli.	Number of proprietor's holding in the settlement khewa khazani.	Proprietor's name, parentage, caste, and residence.	Name of cultivator, his parentage, caste and residence.	DETAIL OF IRRIGATION.				Name of canal and of cut.	Detail of area under each crop for the holding.		Remarks, including note of demand for canal advantage rate where due.
					Number in settlement of khawen of fields irrigated.	Total area of holding irrigated by canal by girdawari.						
						By flow.	By lift.	Total.			Kharif.		Rabbi.

The Executive Engineer will then distribute the number of laborers fixed for each canal over the area irrigated in the preceding year, and will inform each irrigator of the number of laborers which he will have to supply for the clearance and repairs, and of the time when the work will begin. During the clearance, the roster of attendance will be kept by the muharir as before, and as soon as the work is finished the Executive Engineer will prepare a statement for each village showing the amount due from each irrigator on account of non-attendance fines. He will send these lists to the Deputy Commissioner, who will collect the amount with the rabbi instalments in June and July.

Canal records.

10. A record of each canal has been made at the settlement. It consists of the following papers :—

I. A map of the canal on a scale of 240 karams, or 1,620 feet, to the inch, showing—

1. The canal
2. Its branches
 - (a) in use (karia and kassi),
 - (b) disused (khandar).
3. The estates irrigated from the canal, with their boundaries.
4. Chhabs, i.e., previous dams for raising the level of the water.
5. Jhalárs.

Besides these, the boundaries of the villages, irrigations, and the village-sites are shown. The irrigating villages, the estates, and the branches are numbered on the map, and the numbers correspond with the numbers in the administrative paper of the canal.

II. An administration paper divided into the following heads :—

1. History of the canal.
2. List of villages irrigating.
3. List of the branches, with the history of each branch and an account of how the annual clearance is made.
4. Dams (chhabs)—who may erect and with whose leave.
5. Jhalárs.
6. Annual clearance and emergent works—how executed in former times and at present.

11. Under the orders conveying sanction to the assessment reports, it has been decided that the whole of the

Land-revenue.

revenue assessed on land irrigated from canals alone, and two-thirds of that assessed on land irrigated by canals and wells, shall be credited to the Canal Department. This amount will vary slightly every year, but will be approximately Rs. 2,25,000. In

order to make the revenue assessed on canal lands more elastic, it has been arranged to grant remissions of revenue in case of failure of the canals, and to allow the State to participate in the profits resulting from the spread of irrigation. To effect this, the revenue assessed on canal lands has been divided into--

Fixed revenue.

Remissible revenue.

Fixed revenue is that which would have been assessed if the canals had not existed; remissible revenue is that which the existence of the canals has produced. In the tahsils of Sanánwán and Alípur, and in the greater part of Muzaffargarh, the remissible revenue has been assumed to be the whole revenue assessed on lands irrigated by canals alone, and half the revenue assessed on lands irrigated by wells and canals. In a small part of the Muzaffargarh Tahsíl, one-fourth of the revenue assessed on land irrigated by both canals and wells is assumed to be remissible. In case of total failure of a canal to supply water, the whole of the remissible revenue will be remitted. In cases of partial failure, the Deputy Commissioner will decide the proportional amount to be remitted. In order that Government may share the profit of extended irrigation, it has been made a condition of the settlement that land newly coming under canal irrigation shall be assessed with a water-advantage rate, though it was not assessed at settlement. This rate will be levied only on lands actually irrigated in the year for which it was charged. The rate has been fixed at 6 annas per acre in Sanánwán and Alípur. Eight annas per acre was proposed for Muzaffargarh, but no orders have yet been received on the subject. With his letter No. 234, dated 29th May 1879, the Settlement Commissioner submitted draft rules to be issued under the Canal Act, but no orders have been received regarding them, nor have any rules been issued.

12. Zaildárs were appointed in accordance with the orders conveyed in Settlement Commissioner's Circular No. 66 of 2nd September 1873, and the arrangements made were reported in Settlement Officer's letter No. 338, dated 6th December 1874. They are remunerated by a deduction of one per cent. from the land revenue, and by special ináms. The following statement shows the result :—

Name of Tahsíl.	Number of zails.	Number of zaildárs.	Amount of pay at one per cent.	Amount of ináms.	Total.
Muzaffargarh ...	19	22	2,719	1,310	4,029
Alípur ...	21	24	1,693	1,180	2,873
Sanánwán ...	11	13	1,228	820	2,048
Total ...	51	59	5,640	3,310	8,950

Many of the zaildárs have rendered good service to Government gratuitously for a long time. As stated by Mr. Lyall in his review of the Alípur Assessment Report, "the good effect of the system is more apparent in Muzaffargarh than in almost any other district. A link of the kind between the people and district officials was particularly wanted here."

13. In order to carry out the fluctuating system of fluctuating assessment of sailábá and canal lands, and the annual measurements of canal lands which has been introduced at regular settlement, a strong kanungo and patwári establishment was required. Two náib-kanungos have accordingly been sanctioned for each tahsil in addition to the kanungo already appointed in each tahsil. There is a sadar kanungo on Rs. 60 for the district. In the orders on the assessment reports, 6 per cent. was sanctioned as the rate of the patwáris' cess in Sanánwán and Alípur, and $6\frac{1}{2}$ in Muzaffargarh; but, as directed by the Financial Commissioner in his review of the Sanánwán report, these rates have been regarded as a maximum, and in making the detailed arrangements of circles the rate has been kept as low as was consistent with efficiency and the proper remuneration of the patwáris. The following statement shows the result :—

Tahsil.	Number of patwáris' circles.	Rate of patwáris' cess on the jama.	Amount of pay.	REMARKS.
Muzaffargarh	42	6 p. c.	Rs. 6,372	There are 87 circles and 87 patwáris in this tahsil.
	1	$5\frac{1}{2}$ "	199	
	25	5 "	4,026	
	2	$4\frac{1}{2}$ "	396	
	9	4 "	1,364	
	8	$3\frac{1}{2}$ "	1,353	
Total ...	87	...	13,710	
Alípur	51	6 p. c.	8,903	There are 58 circles and 60 patwáris in this tahsil.
	1	5 "	223	
	1	$4\frac{1}{2}$ "	172	
	3	4 "	471	
	2	3 "	318	
Total ...	58	...	10,087	
Sanánwán	19	$5\frac{3}{4}$ p. c.	3,847	There are 39 circles and 44 patwáris in this tahsil.
	20	$4\frac{1}{2}$ "	3,084	
Total ...	39	...	6,931	
Grand Total	184	...	30,728	

All the patwáris know the Persian character. No other character is of use in this district. Dewanagri is unknown, and Kiraki is useless, for it can be read by few except the writer. It is to be hoped that in making future appointments this will be remembered, and also the advisability of appointing residents of the district. It is a common saying that a foreign patwári takes bribes with both hands, but a native with only one.

Native place of patwáris. Of the 191 patwáris in the district—

120	are natives of the	Muzaffargarh District
35	" " "	Mooltan "
5	" " "	Jhang "
2	" " "	Dera Gházi Khan "
29	" " "	other districts

Of the 29 natives of other districts, the greater number have formed connections in this district and are as good as residents.

14. The tenures have been described in Chapter VII. There

Record of rights.

was no difficulty in embodying the facts relating to them in a settlement record. All the culti-

vated land in the district is divided into compact little estates called well if irrigated by well, or well and canal, patti if irrigated by canal alone, and sér if irrigated by sailáb alone. This division made the formation of the record of rights exceptionally easy, for when the shares of the landlords in the land, and tenants in the cultivation, had been ascertained, a short history of each estate supplied every fact that it was necessary to note about the estate. At the same time the small area of each estate and their number made the formation of the record very laborious. In his letter No. 601, dated 5th January 1874, the Settlement Commissioner suggested that it might be possible to do without some of the papers, and that the muntakhab and nakshah chahát should be amalgamated. In Settlement Officer's letter No. 180, dated 15th July 1875, proposals were made to make the muntakhab by wells, and it was shown that it was a waste of labor and paper to make out a separate nakshah chahát, and that besides there was the risk of discrepancy which copying entries from one paper to another involves. In his Secretary's No. 4773½, dated 9th August 1875, the Financial Commissioner approved of the proposal, which afforded substantial relief to the Settlement officials. The original occupiers described in Chapter VI, paras. 16 and 17, were recorded as superior proprietors, the chakdárs as inferior proprietors, and the tenants were classified under the old names of "máurúsi" and "ghair máurúsi." The one novelty in the settlement record is a khewat of date-trees. This shows the following facts:—

1. The owners of the trees.
2. The owner of the land in which the trees grow.
3. Name of the well in which they grow.

4. Khasrah numbers in which they grow.
5. Number of trees in detail :—

- (a) Female.
- (b) Male.
- (c) Eunuchs.
- (d) Young trees.

6. Rate of assessment per tree.
7. Amount assessed, and cesses.

15. Besides the provisions of the administration paper obviously necessary, certain matters which were rendered

The administration paper. necessary by the arrangements made at settlement have been recorded and require notice.

It has been provided that where land unirrigated by canals and unassessed at settlement comes under canal irrigation during the term of settlement, *abiana* shall be charged at 6 annas per acre in Alipur and Sanánwán, and at 8 annas in Muzaffargarh as long as it continues to receive canal water. The obligation to supply *chher* labor according to long-standing custom for the annual clearance and repair of canals has been entered in the administration paper, and the conditions under which canal revenue will be remitted have been recorded as stated in para. 11. When Government released the *rakhs* to the people, as described in para. 3, it retained the ownership of the timber growing in the land released, but allowed the people to cut wood for domestic and agricultural purposes. This reservation has also been entered in the administration paper. It was one of the faults of former revenue administrations in this *tahsíl* that it was not considered within the bounds of possibility that a re-distribution of the *jama* within a village could be made. Men whose land fell out of cultivation had still to pay for that land. Persons who brought fresh land under cultivation were allowed to enjoy the produce revenue free. To prevent the recurrence of this state of things, it has been provided that a re-distribution may be made either when the proprietors wish it, or when the Deputy Commissioner orders it to be made. In villages of which the assessment is fluctuating, all the terms of the assessment as it affects the village have been clearly and simply entered.

Records of general customs.

16. Three records of general customs have been made :—

1. The *Riváj-i-ám*, or statement of usages actually existing in each tract. A copy is appended to the administration paper of each village. Under the orders of the Settlement Commissioner, contained in his Circular No. 35, dated 3rd May 1879, it is stated in the heading of the *Riváj-i-ám* that its contents are not to be presumed to be true like entries in the record of rights under Section 16, Act XXXIII of 1871, and that its object is to assist the civil courts.

2. A statement of customs regarding alluvion and diluvion on the banks of the Indus.
3. A statement of customs regarding alluvion and diluvion on the banks of the Chenab.

Cesses.

17. The cesses payable are—

Patwári's cess	3 to 6 per cent.
Lambardár's „	5 per cent.
School „	1 „
Road „	1 „
Dák „	$\frac{1}{2}$ „

18. In para. 7 of Punjab Government letter No. 652, dated 19th May 1879, the term of settlement was fixed at twenty years in Sanánwán and Alipur. No orders have yet been passed regarding the Muzaffargarh Tahsíl.

Dates of instalments.

19. The dates for paying the instalments of land-revenue are—

Rabbí ... 1st June, 1st July.
 Kharíf ... 1st December, 1st January, 1st February.
 Date instalment, 15th August.

Cost of settlement.

20. The cost of the regular settlement has been as follows :—

From Imperial Funds	..	Rs. 3,97,450
Settlement fees	..	„ 2,74,318
Total Rs. ...		<u>6,71,768</u>

21. Before describing the assessment it will be well to present in a collected form the facts which bear directly on the revenue. We have a district in which the rainfall is so slight that no cultivation depends on it. Of course a shower improves crops already in the ground, but the prospect of rain or no rain does not enter into the calculations of the farmers. Along the banks of the river and extending for a considerable distance inland, is a tract the cultivation of which depends on sailáb alone or sailáb assisted by wells. Inside that tract is another, the cultivation of which is carried on by means of wells and canals. Again, in the inland north part of the district is a country where neither sailáb nor canals reach, and in which agriculture is carried on by wells alone.

22. The following statement shows the number of tenants and the area cultivated by them. The trae of mahsúl prevailing is also given :—

Tenants.

23. Statistics of prices have been collected from 1854 to 1877.

Prices. The following statement shows the variations in prices as regards the eight crops which occupy the largest area and contribute most to pay the land-revenue:—

PERIOD OF FIVE YEARS EACH.	WHEAT.			PEAS.			GRAM.			COTTON CLEAN- ED.			INDIGO.			RICE UNCLE- ANED.			BAJRA.			GUR.		
	M	S	C	M	S	C	M	S	C	M	S	C	M	S	C	M	S	C	M	S	C	M	S	C
1854-5 to 1858-9	35	14	1	12	1	...	37	8	...	3	10	...	11	...	39	9	1	...	2	...	15	10	...
1859-60 to 1863-4	29	14	1	...	8	...	28	9	...	2	11	...	12	...	35	7	...	29	13	...	10	11	...
1864-5 to 1868-9	21	13	...	29	6	...	21	9	...	2	11	...	9	...	25	5	...	23	11	...	9	11	...
1869-70 to 1873-4	23	1	...	29	15	...	22	...	...	2	10	...	11	...	34	15	...	25	...	...	9	5	...
1874-5 to 1876-7	27	7	...	38	13	...	30	15	...	3	...	...	11	...	34	14	...	32	1	...	11	7	...

During the 23 years prices were lowest in the first five years, and rose generally during the next ten, falling again during the last eight years, but not so much as to reach the low prices of the first five years. Since 1877 prices have risen very much. Wheat is selling in 1881 at 13 sérs for the rupee.

24. The cultivated area was measured in 1857 by the patwáris, but the measurements were condemned by the Commissioner as incorrect. Experience has shown that the cultivation was largely understated. The following statement shows the area of cultivation according to the revenue survey made in 1856-57 and the measurements of the regular settlement just concluded:—

TAHSIL.				Cultivation according to revenue survey.	Cultivation according to regular settlement measurements.	Difference per cent.
				Acres.	Acres.	Acres.
Muzaffargarh	..	..	..	164,860	170,186	— 3.2
Alipur	..	..	..	116,099	121,312	— 4.4
Sanánwán	..	..	..	110,308	107,769	— 2.3
Total			..	391,267	399,267	— 2.5

There is therefore an increase of only 8,000 acres in cultivation since 1856-57. The causes of the increase being so small were fully discussed in the assessment reports. They were neglect of the canals, arbitrary inclusion of private land in the rakhs, and generally bad revenue administration.

Jama of the district before the new assessments.

25. The average jama of the district in the five years preceding the new assessments was as follows :—

TAHSIL.			JAMA.
			Rs.
Muzaffargarh	..	..	2,24,864
Alipur	..	..	1,49,602
Sandánwán	..	..	1,20,505
Total	..	..	5,04,971

The income from cattle tiri in 1877-78 was Rs. 34,623. The tiri from camels is not included because the settlement has caused no change in its administration. The revenue from date-trees in 1877-78 was Rs. 11,503.

26. Following the divisions of the district as formed by the sources of irrigation, the following assessment circles were formed :—

TAHSIL.	ASSESSMENT CIRCLES.
Muzaffargarh.	Bet Chenáb Bet Indus Chahi Sailábá Chahi Thal Chahi Nahri Chahi Nahri
Alipur.	Bet Chenáb Bet Indus Chahi Sailábá Chahi Nahri
Sandánwán.	Bet Pakka Chahi Nahri Thal Chahi Nahri Thal Chahi

Produce estimate jama.

27. The jama of the district by the produce returns came out as follows :—

TARSIŁ.	ASSESSMENT CIRCLES.	Share of produce assumed to represent the jama.	Estimated jama.
Muzaffargarh.	Bet Chenáb	$\frac{22\frac{1}{2}}{100}$	64,419
	Bet Indus	$\frac{16\frac{1}{2}}{100}$	14,146
	Chahi Sailábá	$\frac{19}{100}$	25,894
	Chahi	$\frac{14}{100}$	2,118
	Thal Chahi Nahri ..	$\frac{14}{100}$	27,263 3,25,499
	Chahi Nahri	$\frac{16\frac{1}{2}}{100}$	1,91,659
Alipur.	Bet Chenáb	$\frac{15\frac{1}{2}}{100}$	22,836
	Bet Indus	$\frac{16\frac{1}{2}}{100}$	29,451
	Chahi Sailábá	$\frac{14}{100}$	34,244
	Chahi Nahri	$\frac{14\frac{1}{2}}{100}$	1,68,415 81,884
Sardhwan.	Bet	$\frac{13}{100}$	34,390
	Pakka Chahi Nahri ..	$\frac{15}{100}$	78,965
	Thal Chahi Nahri ..	$\frac{13\frac{1}{2}}{100}$	14,269
	Thal Chahi	$\frac{14\frac{1}{2}}{100}$	1,33,341 5,726
	Total of District ..		6,27,255

28. As stated in para. 2 of this chapter, soils were classified according to their means of irrigation as follows
Assessment rates adopted. throughout the district :—

1. Sailábá
2. Chahi Sailábá
3. Chahi Nahri
4. Chahi
5. Paggu
6. Jhalári

29. In consequence of the large area depending on sailáb, and the uncertainty of that means of irrigation, a fluctuating system of assessment has been sanctioned for the Bet assessment circles and the chahi sailáb circle of Alípur. The procedure and rates differ slightly in the three tahsils. In Sanánwán, which was first reported, the whole of the Bet circle will be assessed every year on the area under cultivation. Cultivation by sailáb alone will pay a mean rate of 13 annas per acre, and each well and jhalár in work will pay a yearly fee of Rs. 6. The small area of canal-irrigation in this circle will also be annually assessed. In the Indus Bet circles of Muzaffargarh and Alípur the whole cultivation will come under fluctuating assessment. The sailábá rate was fixed at 15 annas per acre, and the well and jhalár rate at Rs. 6. In the chahi sailábá circle of Alípur the whole will be annually assessed. The sailábá rate is 14 annas per acre, and the well rate Rs. 8. There is a Bet Chenáb circle in Muzaffargarh and Alípur. From the southern end of the district to the junction of the Sutlej with the Chenáb opposite Madwala, this circle is much affected by the river, and violent changes occur by erosion and by lands being thrown out or brought under cultivation. The whole of this part of the Bet circle has been brought under fluctuating assessment. The whole Chenáb Bet in both tahsils north of the Sutlej has an assessment partly fixed and partly fluctuating. The wells have got a fixed assessment, and the sailábá land alone will be assessed annually. In Alípur the sailábá rate is Rs. 1-1-0, in Muzaffargarh Rs. 1-2-6. The well rate in the Alípur Chenáb Bet south of the Sutlej is Rs. 9.

Produce jama, revenue rate jama, and assessed jama compared.

30. The sanctioned rates gave the following jama:—

Muzaffargarh	...	Rs. 2,52,135
Alípur	...	" 1,53,174
Sanánwán	...	" 1,19,604
Total	...	" 5,24,913

This is Rs. 1,02,342 less than the produce jama. The jama actually assessed was as follows:—

Muzaffargarh	...	Rs. 2,51,302
Alípur	...	" 1,50,385
Sanánwán	...	" 1,22,781
Total	...	" 5,24,468

which differs from the revenue rate jama by Rs. 445 only. The new jama, Rs. 5,24,468, compared with the average jama of the last five years of the summary settlement, which was Rs. 5,04,970, gives an increase of Rs. 19,498, or 3·8 per cent.

31. Under the summary settlement, tirni, or grazing dues, were levied in those villages only which contained Government rakhs. The village grazing-lands, however large, were exempt from assessment.

Assessment on grazing lands. At the regular settlement the village grazing-lands have been assessed for the term of settlement. The assessment was based on their capability for grazing and on the number of cattle. The rates adopted varied from one rupee per 100 acres in the Thal to five rupees in the Bet. These rates gave the following jama:—

			Rs.
Muzaffargarh	...	...	9,138
Alipur	...	...	12,712
Sanánwán	...	...	9,782
Total	...	...	<u>31,632</u>

The grazing assessment as distributed was as follows:—

			Rs.
Muzaffargarh	...	...	9,488
Alipur	...	...	14,420
Sanánwán	...	...	9,480
Total	...	...	<u>33,388</u>

32. Under the summary settlement this assessment was Rs. 11,503. The sanctioned rate for the regular settlement was one anna per tree, which gave a revenue rate jama as follows:—

			Rs.
Muzaffargarh	...	...	13,895
Alipur	...	...	4,816
Sanánwán	...	...	4,178
Total	...	...	<u>22,889</u>

The date jama as assessed was—

			Rs.
Muzaffargarh	...	...	11,101
Alipur	...	...	4,334
Sanánwán	...	...	3,691
Total	...	...	<u>19,126</u>

Final results of the settlement.

33. The following statement compares the new and old revenue from all sources:—

				Old Revenue.	New Revenue.
				Rs.	Rs.
Land Revenue	...	...	...	5,91,970	5,24,463
Grazing	...	...	...	54,823	33,388
Dates	...	...	...	11,503	19,226
Total				<u>5,51,096</u>	<u>5,77,082</u>

To the new revenue should be added the amount for which the Government rakhs are leased. This will never be less than Rs. 5,000 including Forest Department rakhs. Taking this into consideration there is an increase of Rs. 32,986.

34. The jagirs and muafis in this district are very few. The village of Lalpur was assigned revenue free to the late Nawáb Foujdar Khan and his heirs in perpetuity. It is situated in the Bet Chenáb. Its assessment on the area of settlement was Rs. 2,174. The other muafis in the district aggregate Rs. 1,405 only. The assignments of land revenue as pay and ináms to zaildárs amount to Rs. 8,950.

35. In his Secretary's No. 8238 S, dated 18th December 1880, the Financial Commissioner desired that a statement should be prepared showing the result of the working of the new system of fluctuating assessments. The following statement shows the results :—

Name of Tahsil.			Jama of 1878-79.	Jama of 1879-80.	Jama of 1880-81.
			Rs.	Rs.	Rs.
Muzaffargarh	...	...	34,943	35,363	38,902
Alipur	...	...	76,421	80,345	81,429
Sanjāwān	...	...	21,298	30,208	27,209
Total			1,32,662	1,45,916	1,47,540

The jama for 1878-79 is that of the old system. Since then three annual assessments have been made :—

- (1.) In the cold weather of 1878-79 the jama for 1879-80 was assessed. This gave an increase of Rs. 13,254 on the jama under the old system.
- (2.) In the cold weather of 1879-80 the jama for 1880-81 was assessed. This gave a further increase of Rs. 1,624.
- (3.) In the cold weather of 1880-81 the jama for 1881-82 was assessed. The results are not available at present. The system is very popular. It has so far resulted in an increase of revenue. To work it successfully required activity and close attention from the District Officer and the Tahsildárs. If the supervision is relaxed, oppression on the one hand and loss of revenue on the other will be the result.

E. O'BRIEN,
Settlement Officer.

APPENDIX I.

2.—ANNUAL DEMAND STATEMENT.

2.—Annual Demand

[illegible]

I.

Statement.

ASSESSMENT.

Kharif 1944. Rabbi 1945.	Kharif 1945. Rabbi 1946.	Kharif 1946. Rabbi 1947.	Kharif 1947. Rabbi 1948.	Kharif 1948. Rabbi 1949.	Kharif 1949. Rabbi 1950.	Kharif 1950. Rabbi 1951.	Kharif 1951. Rabbi 1952.	Kharif 1952. Rabbi 1953.	Kharif 1953. Rabbi 1954.	Kharif 1954. Rabbi 1955.	Kharif 1955. Rabbi 1956.
695	695	695	695	695	699	703	703	703	703	703	703
1,367	1,367	1,367	1,371	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375
436	436	436	436	436	436	436	436	439	439	439	439
2,125	2,125	2,125	2,125	2,125	2,125	2,125	2,125	2,135	2,140	2,140	2,140
2,812	2,812	2,812	2,812	2,812	2,812	2,812	2,812	2,815	2,816	2,816	2,816
501	501	501	501	506	510	510	510	510	510	510	510
1,824	1,824	1,824	1,824	1,822	1,830	1,830	1,830	1,830	1,830	1,830	1,830
1,568	1,568	1,568	1,568	1,573	1,576	1,576	1,576	1,576	1,576	1,576	1,576
1,031	1,031	1,033	1,038	1,041	1,041	1,041	1,041	1,041	1,041	1,041	1,041
1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,168	1,172	1,173	1,173	1,173
307	307	307	307	307	307	307	327	327	327	327	327
2,535	2,535	2,535	2,535	2,535	2,542	2,548	2,548	2,548	2,548	2,548	2,548
1,258	1,258	1,258	1,258	1,258	1,260	1,264	1,266	1,266	1,266	1,266	1,266
2,448	2,448	2,448	2,448	2,448	2,455	2,465	2,465	2,465	2,465	2,465	2,465
3,906	3,906	3,905	3,905	3,905	3,905	3,907	3,911	3,911	3,911	3,911	3,911
136	136	136	136	136	142	145	145	145	145	145	145
1,370	1,370	1,370	1,373	1,380	1,389	1,382	1,385	1,385	1,385	1,385	1,385
736	736	736	736	736	737	738	738	738	738	738	738
786	786	786	786	786	791	798	801	801	801	801	801
1,265	1,265	1,265	1,265	1,265	1,265	1,265	1,265	1,265	1,265	1,267	1,270
1,236	1,236	1,236	1,236	1,236	1,236	1,260	1,260	1,260	1,260	1,260	1,260
485	485	485	485	485	485	485	488	489	489	489	489
810	810	810	810	810	811	812	812	812	812	812	812
756	756	756	756	756	760	765	765	765	765	765	765
439	439	439	439	439	439	439	447	451	451	451	451
472	472	472	472	472	475	489	495	499	501	501	501
1,321	1,321	1,321	1,321	1,321	1,321	1,351	1,351	1,351	1,351	1,351	1,351
788	788	788	788	788	806	814	814	814	814	814	814
2,034	2,034	2,034	2,034	2,034	2,034	2,036	2,036	2,036	2,036	2,036	2,036
422	431	436	436	436	436	447	452	452	452	452	452
1,030	1,034	1,034	1,034	1,034	1,034	1,049	1,049	1,049	1,049	1,049	1,049
535	538	539	539	539	539	539	539	539	539	539	539
2,346	2,346	2,346	2,346	2,347	2,347	2,356	2,356	2,356	2,356	2,356	2,356
1,965	1,965	1,975	1,983	1,984	1,984	1,984	1,984	1,984	1,984	1,985	1,985
278	278	278	278	278	278	280	283	283	282	283	283
1,205	1,205	1,205	1,214	1,216	1,218	1,218	1,218	1,218	1,218	1,218	1,218
1,126	1,126	1,126	1,126	1,141	1,162	1,172	1,175	1,175	1,175	1,175	1,175
1,111	1,111	1,111	1,120	1,128	1,128	1,128	1,128	1,128	1,128	1,128	1,128
1,948	1,948	1,957	1,965	1,965	1,971	1,976	1,976	1,976	1,976	1,976	1,976
1,087	1,087	1,087	1,087	1,087	1,091	1,095	1,095	1,095	1,095	1,095	1,095
613	613	613	613	613	613	614	615	615	615	615	615
66	66	66	66	66	69	72	72	72	72	72	72
414	414	414	439	451	451	451	451	451	451	451	451
1,513	1,513	1,513	1,513	1,520	1,537	1,552	1,556	1,556	1,556	1,556	1,556
364	364	364	364	367	369	369	369	369	369	369	369
233	233	238	241	241	241	241	241	241	241	241	241
130	130	130	130	130	137	142	142	142	142	142	142
138	138	138	138	138	140	142	142	142	142	142	142
1,231	1,231	1,231	1,233	1,234	1,234	1,237	1,240	1,240	1,240	1,240	1,240
1,463	1,463	1,463	1,463	1,463	1,463	1,463	1,463	1,471	1,479	1,479	1,479
1,052	1,052	1,052	1,052	1,052	1,052	1,057	1,059	1,059	1,059	1,059	1,059
541	541	541	541	541	541	541	545	547	547	547	547
452	453	453	453	453	453	453	453	454	455	455	455
223	223	223	223	224	245	245	248	254	254	254	254
890	890	890	890	890	890	890	895	897	897	897	897

I.—continued.

ASSESSMENT.

Kharif 1944. Rabbi 1945.	Kharif 1945. Rabbi 1946.	Kharif 1946. Rabbi 1947.	Kharif 1947. Rabbi 1948.	Kharif 1948. Rabbi 1949.	Kharif 1949. Rabbi 1950.	Kharif 1950. Rabbi 1951.	Kharif 1951. Rabbi 1952.	Kharif 1952. Rabbi 1953.	Kharif 1953. Rabbi 1954.	Kharif 1954. Rabbi 1955.	Kharif 1955. Rabbi 1956.
402 344 1,875 535 1,143 2,162 1,546 2,743	405 346 1,875 535 1,145 2,162 1,546 2,743	405 347 1,875 535 1,145 2,172 1,546 2,749	405 347 1,883 535 1,145 2,187 1,546 2,762	405 347 1,886 535 1,145 2,187 1,546 2,772	405 347 1,886 535 1,145 2,187 1,546 2,774	413 347 1,886 535 1,151 2,190 1,546 2,774	417 347 1,886 535 1,151 2,195 1,548 2,774	417 347 1,886 535 1,151 2,195 1,548 2,774	417 351 1,886 537 1,154 2,195 1,549 2,774	417 353 1,886 538 1,154 2,195 1,549 2,774	417 353 1,886 538 1,154 2,195 1,549 2,774
69,745	69,767	69,825	69,949	70,054	70,186	70,375	70,494	70,551	70,576	70,592	70,585
1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,51,142
2,23,887	2,23,909	2,23,967	2,24,091	2,24,196	2,24,328	2,24,515	2,24,636	2,24,836	2,24,718	2,24,724	2,24,727
47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164
2,71,051	2,71,073	2,71,122	2,71,235	2,71,360	2,71,492	2,71,679	2,71,800	2,71,857	2,71,882	2,71,888	2,71,891
2,250 3,252 2,367 5,433 952 619 1,239 1,759	2,250 3,252 2,367 5,433 952 619 1,239 1,759	2,250 3,252 2,367 5,433 952 619 1,239 1,759	2,250 3,252 2,367 5,445 952 619 1,239 1,759	2,250 3,252 2,367 5,445 952 619 1,239 1,759	2,250 3,252 2,367 5,445 952 619 1,239 1,759	2,250 3,252 2,367 5,445 958 619 1,243 1,759	2,250 3,258 2,367 5,445 958 619 1,243 1,759	2,250 3,258 2,378 5,445 958 619 1,250 1,759	2,250 3,258 2,378 5,445 959 623 1,250 1,759	2,250 3,258 2,378 5,445 959 623 1,250 1,759	2,250 3,258 2,378 5,445 959 623 1,250 1,759
17,876	17,875	17,875	17,887	17,888	17,868	17,902	17,918	17,956	17,941	17,941	17,941
65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396
83,271	83,271	83,271	83,283	83,284	83,284	83,298	83,314	83,332	83,337	83,337	83,337
...
...

APPENDIX

Name of Tahsil.	Number.	VILLAGE.	Assessment of the last year of the expired settlement.	PROPOSED									
				Kharif 1935 Sambat.	Rabbi 1936 do.	Kharif 1936.	Rabbi 1937.	Kharif 1937.	Rabbi 1938.	Kharif 1938.	Rabbi 1939.	Kharif 1939.	Rabbi 1940.
TAHSIL SANAWAN	1	Ihsanpur ...	1,213	1,459 0 0	1,459	1,459	1,459	1,459	1,459	1,459	1,459	1,459	1,459
	44	Bet Rugwala ...	833	890 0 0	890	890	890	890	890	890	890	890	890
	57	Bet Mahesar ...	840	872 0 0	872	872	872	872	872	872	872	872	872
	37	Parihar Gharbi ...	1,933	2,425 0 0	2,425	2,425	2,425	2,425	2,425	2,425	2,425	2,425	2,425
	70	Tibbi Nazam ...	825	762 0 0	762	762	762	762	762	762	762	762	762
	22	Chowdhri ...	3,352	3,707 0 0	3,707	3,707	3,707	3,707	3,707	3,707	3,707	3,707	3,707
	53	Days Ghokha ...	5,241	5,271 0 0	5,271	5,271	5,271	5,271	5,271	5,271	5,271	5,271	5,271
	32	Kahiri ...	703	708 0 0	708	708	708	708	708	708	708	708	708
	45	Ladah Langar ...	1,797	1,749 0 0	1,749	1,749	1,749	1,749	1,749	1,749	1,749	1,749	1,749
		Total ...	16,737	16,843 0 0	16,843	16,843	16,843	16,843	16,843	16,843	16,843	16,843	16,843
		Aggregate of the remaining 88 villages (without Bet Circle) ...	76,505	83,835 0 0	83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835
		Grand Total of whole villages (except Bet Circle) ...	92,242	1,00,678 0 0	1,00,678	1,00,678	1,00,678	1,00,678	1,00,678	1,00,678	1,00,678	1,00,678	1,00,678
		Total Bet villages ...	30,223	35,165 8 0	...	..	...	..	...	..	...	..	...
		Total of Tahsil ...	1,22,475	1,35,843 8 0	..	...	..	...	..	...	..	...	..

I.—concluded.

ASSESSMENT.

Kharif 1943. Rabbi 1944.	Kharif 1944. Rabbi 1945.	Kharif 1945. Rabbi 1946.	Kharif 1946. Rabbi 1947.	Kharif 1947. Rabbi 1948.	Kharif 1948. Rabbi 1949.	Kharif 1949. Rabbi 1950.	Kharif 1950. Rabbi 1951.	Kharif 1951. Rabbi 1952.	Kharif 1952. Rabbi 1953.	Kharif 1953. Rabbi 1954.	Kharif 1954. Rabbi 1955.	Kharif 1955. Rabbi 1956.
1,459 390 372 2,425 762 3,707 6,271 708 1,749	1,459 390 372 2,425 762 3,707 6,271 708 1,749	1,459 390 372 2,436 762 3,707 6,271 708 1,749	1,459 390 372 2,447 762 3,707 6,271 708 1,749	1,459 390 372 2,447 762 3,707 6,271 708 1,749	1,462 393 372 2,447 762 3,707 6,271 708 1,735	1,464 397 372 2,452 765 3,707 6,271 713 1,760	1,465 397 372 2,456 768 3,707 6,271 719 1,760	1,466 397 376 2,456 768 3,707 6,276 719 1,760	1,468 397 380 2,456 768 3,707 6,279 719 1,760	1,470 397 384 2,456 769 3,713 6,279 719 1,760	1,470 397 384 2,456 769 3,713 6,279 719 1,760	1,470 397 384 2,456 769 3,713 6,279 719 1,760
16,843	16,843	16,854	16,865	16,865	16,877	16,901	16,915	16,924	16,934	16,946	16,951	
83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	
1,00,678	1,00,678	1,00,689	1,00,700	1,00,700	1,00,712	1,00,726	1,00,750	1,00,759	1,00,769	1,00,781	1,00,786	
..	
..	

E. O'BRIEN,
Settlement Officer.

APPENDIX II.

3. Statement of Tenures on which the Estates are held in the Muzaffargarh District.

NAME OF TANSIL.	Zamindāri.		Pattidāri.		Bhaya- chara.	Mixed Pattidāri and Bhayachara.	Talukadari or Istamari.
	Land lord.	Commu- nal.	Com- plete.	Incom- plete.			
Muzaffargarh ...	12	18	9	...	377	1	59
Alipur ...	1	7	1	...	167	...	...
Sanawnan ...	...	27	1	...	106	4	...
Total ...	13	52	11	...	650	5	58

E. O'BRIEN,
Settlement Officer.

APPENDIX III.

FORM A.

4. GENERAL ABSTRACT OF AREA, RESOURCES, &c.

APPENDIX III.

FORM A.

General abstract of Area, Resources, Jama and Rates in the several Assessment Circles of Muzaffargarh District.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
NAME OF TAHSIL.	Former and present statement compared.	NUMBER OF MAHAL.					SECTION I.—AREA AS ARRANGED FOR ASSESSMENT IN ACRES.											
		Khalisa.	Khalisa and shared.	Jagir.	Total.	MINHAI OR NOT ASSESSED.						MALGUZARI OR ASSESSED.						
						Waste.	Government Rukhs.	Revenue assigned.	Total unassessed.	Culturable.	Fallow and abandoned.	Cultivated.				Total of cultivated and fallow.		
						Total area.							With natural Irrigation, salabha.	With artificial Irrigation.	Unirrigated.	Total.		
Muzaffargarh	Former	298	...	...	2	300	125,012	78	...	53	131	200	1,872	25,846	96,963	...	122,809	134,681
	Present	409	...	...	2	411	589,689	130,451	93,917	460	224,828	177,003	18,226	43,216	126,366	50	169,632	187,858
Alipur	Former	109	...	...	...	109	148,244	10,836	...	249	11,084	27,398	29,230	32,781	47,751	...	90,532	109,762
	Present	177	...	...	...	177	568,603	86,759	52,552	167	139,478	287,910	50,186	49,632	71,377	...	121,029	171,215
Fanawan	Former	107	...	...	...	107	87,931	1,920	...	443	2,363	10,052	2,572	11,016	61,928	...	72,944	75,516
	Present	134	...	...	...	134	849,527	63,487	166,672	219	230,378	493,776	18,505	25,508	81,360	...	106,868	125,373
	Former	514	...	...	2	516	361,187	12,833	...	745	13,578	37,650	33,674	69,643	206,642	...	276,285	309,959
Total	Present	720	...	...	2	722	2,007,819	28,697	313,141	846	594,684	928,689	86,917	118,376	279,103	50	397,529	484,446

FORM A.—Continued.

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
SECTION II.—RESOURCES AND CAPABILITIES CONSIDERED IN DIFFERENT ASPECTS.																		
NAME OF TAHSIL.	AREA IN ACRES AND PERCENTAGE ON CUL- TIVATED AND FALLOW AREA AS GIVEN IN COLUMN 18.		PERCENTAGE OF PRODUCE ARRANGED IN CLASSES. (SEE FORM D.)				CATTLE.				POPULATION.		WELL.					
	Manured.	Irrigated.	Zabi.	Palkash.	I	II	III	IV	Number of head of plough cattle.	Intire number of head of cattle.	Plough including ploughs used on land, the revenue of which is assigned.	Cultivation, includ- ing cultivation of land, the revenue of which is assigned.	Number of	Per square mile of cultiva- tion, including the revenue of which is assigned.	Old.	New	Out of use.	
Muzaf- fargah {	Former	...	122,809	...	...	...	...	...	36,140	84,026	18,070	17,247	111,885	...	4,284	...	691	
	Present	10,343	169,582	29,961	...	30,553	95,761	22,074	21,242	39,044	157,150	19,522	21,217	129,878	489	4,739	924	
	Former	...	80,592	...	18	56	13	13	...	22,653	...	...	...	...	...	2,681	...	1,274
Alipur {	Present	6,673	121,029	1,027	...	14,743	61,374	29,160	15,752	26,801	115,646	13,231	17,707	89,656	474	2,836	285	1,011
	Former	...	72,944	141	...	10,665	39,603	11,733	6,793	18,045	...	...	...	...	...	3,668	...	93
	Present	24,623	106,508	473	...	11,392	62,055	17,059	16,362	25,208	162,916	2(13)	...	70,928	461	2,869	666	567
Sanan- wan {	Former	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Present	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Former	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total... {	Former	...	276,285	141	...	10,665	39,603	11,733	6,793	76,838	84,026	18,070	17,247	111,885	...	10,033	...	2,058
	Present	41,633	397,479	31,461	...	15	54	16	9	91,933	435,712	39,753	38,924	296,442	622	10,434	1,460	2,902
	Former	...	82	6	...	14	55	17	14	...	...	...	...	...	...	...	...	...

FORM A.—Continued.

	36	37	38	39	40	41	42	43	44	45	46	47	48			
NAME OF TAMUL	SECTION II.—RESOURCES AND CAPABILITIES CONSIDERED IN DIFFERENT ASPECTS—continued.							SECTION III.—SUMMARY AND LAST SETTLEMENT JAMA COMPARED.								
	Former and present statement compared.	WATER CAPACITY.				CAPACITY FOR EXPANSION.			Jama of first Summary Settlement of 1860-61.	Jama of second Summary Settlement of 1867-68.	Jama of 3rd Summary Settle- ment of 1860-61.	Jama of last Settlement as it stood in 1876-77.	RATE ON CUL- TIVATION.			
		Average rainfall in inches.	Average depth of wells in feet to the water.	Average cost of constructing a well.	No. of yoke of oxen required per well.	Area one well can irrigate in a year.	Total area uncultivated and percentage of area in cultivated to total area (in black type).	Head of cattle per acre.					Of Summary Settlement.	Of last settlement Jama as per Col. 46.		
Muzaffargarh	Former ...	...	...	...	19	2,072	1	2,49,931	411	2,50,882	1510	2,34,769	510	112	5	11010
Alipur	Present ...	...	11	215	6	4	20	2,49,931	411	2,50,882	1510	2,34,769	510	147	1	62
	Former ...	...	...	...	...	...	39	...	...	...	...	...	...	...	...	...
Sananwan	Present ...	7	16	210	0	4	12	1,43,432	0	...	...	1,50,065	0	0	113	6149
	Former ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	Present ...	128	14	212	8	0	4	2,08,362	0	...	...	1,21,478	0	0	103	122
	Former ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	Former ...	...	...	...	...	...	19	2,49,931	411	2,50,882	1510	2,34,769	510	112	5	11010
	Present ...	...	12	212	10	2	4	5,06,725	411	2,50,882	1510	5,12,912	510	145	1	48
							51									

FORM A.—Concluded.

		49	50	51	52	53	54	55	56	57	58	
SECTION IV.—PROPOSED JAMA WORKED OUT FROM RATES AND ESTIMATES.												
NAME OF TAHSIL.	Former and present statement compared.	RATES ADOPTED IN ASSESSMENT.				ESTIMATES ADOPTED.				Present Jama of Sambal with rate on cultivated area.	Proposed Jama with rate on cultivated area.	Cultivated area of Sambal 1933 on which rates have been cultivated.
		Irrigated.		Unirrigated.	Halt assets Jama.	Crop rates in the Canal Circle.	As per New Revenue Rates.					
		Well.	Canal.									
		On plough.										
Muzaffargarh	Former	...	...	...	...	...	...	...	2,34,769	...	...
	Present	...	1 2 10	1 9 8	0 13 6	3,25,499	1,70,751	2,35,605	2,34,769	10 10 10	2,34,419 6 0	
Alipur	Former	...	...	...	...	...	...	...	...	...	...
	Present	...	1 2 0	1 7 0	0 15 3	...	...	1,47,283	1,56,665	0 0 0	1,47,283 0 0
Sananwan	Former	...	...	1 3 3	...	...	...	...	...	...	...
	Present	...	0 13 6	0 15 6	0 9 6	...	...	1,14,733	1,21,478	0 0 0	1,14,760 0 0
Total	Former	...	...	1 3 3	...	...	...	...	2,34,769	5 10 10	...
	Present	...	...	...	...	3,25,499	1,70,751	4,97,621	5,12,912	5 10 10	4,96,462 0 0
											397,409	
											1 4 0	

E. O'BRIEN

Settlement Officer,

APPENDIX IV.

5.—GENERAL STATEMENT BY VILLAGE.

IV.

by Village.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS
Uncultivated		Cultivated			Total malguzari lands	Total area	Total malguzari lands	Total land under cultivation	Grazing land jansak	Date jansak	Grand Total	
Culturable waste	Lately abandoned	Irrigated	Unirrigated	Total								
577	30	234	611	875	1,482	0 10 1 0 11 6 1 3 6	50	..	1,117	This village required reduction, but it was not necessary to go so low as revenue rates.		
16,59	8	38	385	423	2,090	0 3 0 0 3 9 1 2 6	41	..	530			
7	..	..	14	14	21	0 12 2 0 12 2 1 2 3	..	..	16
670	22	182	1,026	1,208	1,900	0 10 4 0 12 3 1 3 3	35	..	1,490			
239	108	808	569	1,367	1,709	0 14 10 1 2 3 1 6 9	34	400	2,379			
18	2	25	82	107	127	0 14 6 1 0 2 1 3 2	..	..	128	
219	8	17	396	413	670	0 10 4 0 12 4 1 3 11	13	2	623			
13	8	223	42	265	288	0 9 4 1 8 7 1 10 7	20	306	763			
24	40	366	152	508	672	0 8 8 1 6 4 1 9 3	30	23	868			
312	9	13	278	292	613	0 8 2 0 8 4 1 1 6	16	..	336	A superior village, on the Bhagatari Dhand from which it gets jhandaz irrigation.		
57	..	28	108	136	193	0 13 7 0 13 10 1 3 8	2	..	163			
4	..	12	19	31	35	1 3 2 1 3 2 1 5 8	..	..	42	
160	21	129	536	665	846	0 10 10 0 15 7 1 3 10	18	3	847			
13	2	26	46	72	88	0 14 11 1 1 1 1 4 11	..	..	94	
11	..	3	23	26	37	0 13 10 0 13 10 1 3 8	..	..	32	
184	44	319	83	402	630	0 10 0 0 15 1 1 7 8	16	5	613			
166	..	13	..	13	178	0 0 11 0 1 5 1 3 8	2	..	18			
149	8	25	90	113	272	0 3 0 0 8 11 1 6 2	..	6	139			
30	45	134	176	309	384	0 8 1 0 15 7 1 3 4	8	..	381	An inferior Bel village of poor proprietors. Hence I fixed the salubra rate at Rs. 1 per acre instead of Rs. 1-2-6, the sanctioned revenue rate.		
67	4	77	91	168	239	0 11 5 0 14 2 1 4 1	4	..	213			
55	3	99	230	320	378	0 8 3 0 10 1 3 15	3	..	400			
24	..	..	93	93	117	0 11 9 0 13 6 1 1 0	..	..	99
361	1	..	78	78	440	0 1 5 0 2 10 1 0 0	10	..	88			
25	25	
264	1	53	397	450	815	0 8 7 0 9 7 1 1 4	18	..	505			
767	77	212	364	666	1,410	0 6 3 0 8 1 1 4 2	42	25	781			
29	1	82	26	58	88	0 9 7 0 12 11 2 9	2	..	79			
973	30	169	343	512	1,015	0 3 0 0 6 11 1 4 6	60	1	718	Was assessed under rates because the Langarwah Canal which irrigated 138 acres at measurement has ceased to flow.		
29	..	..	33	33	62	0 0 11 0 9 0 1 1 0	..	..	33
1,717	121	531	261	792	2,600	0 3 9 0 5 9 1 3 0	32	16	1,047			
190	11	48	201	249	450	0 5 6 0 10 11 1 3 8	15	..	321			
308	12	520	340	860	1,750	0 15 0 1 1 11 5 11	21	7	1,211			
354	2	142	47	189	545	0 4 2 0 7 6 1 5 7	18	1	274			
139	5	68	68	134	328	0 6 11 0 5 3 1 4 2	19	..	173			
1,463	23	261	108	369	1,853	0 3 7 0 4 2 1 5 1	74	83	643			
76	10	93	20	113	199	0 10 11 0 12 0 1 5 1	4	7	160			
178	82	85	213	0 3 3 0 6 9 1 0 11	6	..	96	This village is well situated as regards markets being at the Sher Shah Ferry. Owners well off and river action is favorable		
777	122	484	1,015	1,499	2,398	0 10 11 0 12 6 1 4 0	45	27	1,943			
1,634	246	1,123	1,391	2,514	4,393	0 11 9 0 12 10 1 6 6	94	..	3,623			
437	66	64	411	476	978	0 8 8 0 9 2 1 2 10	40	..	600			

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Kinlaah, diarah or jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhai		
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rath
				Brought forward										
44				Bhart Wahi ..	150 0 0	150 0 0	135 0 0	22	23	31	48	..	..	..
45				Lalpur ..	2,800 0 0	2,800 0 0	2,800 0 0	2,800	2,163	2,174	2,299	11	104	..
46				Hajipur 2nd ..	2,882 9 6	2,859 6 6	2,400 0 0	1,673	1,701	1,661	2,244	9	362	..
47				Shahpur ..	267 12 0	320 0 0	270 0 0	395	404	408	850	..	180	..
48				Chak Alga Patil ..	1,213 12 0	1,450 0 0	1,162 0 0	1,171	1,182	1,171	1,364	..	75	..
49				Bulewahan ..	..	..	238 0 0	658	849	857	1,749	..	332	..
50				Kaoli Jai ..	358 7 6	500 0 0	500 0 0	1,213	1,211	1,217	1,774	..	155	..
51				Fatch Bela ..	..	..	..	175	188	183	986	..	67	..
52				Bet Panjari ..	1,279 2	1,100 0 0	800 0 0	929	695	750	1,123	..	113	..
53				Bet Dahli ..	930 12 0	900 0 0	700 0 0	701	626	701	881	..	84	..
54				Bet Nawan ..	784 2 9	600 0 0	600 0 0	319	444	415	1,288	..	273	..
55				Sulemanpur ..	..	60 0 0	30 0 0	246	407	407	584	..	96	..
56				Tahirpur ..	..	..	..	179	474	474	1,058	..	25	..
57				Miranpur ..	479 12 0	400 0 0	320 0 0	573	449	461	702	..	80	..
58				Taraf Dhol ..	136 4 0	160 0 0	120 0 0	235	196	204	594	..	104	..
59				Kanwadi ..	619 0 0	740 0 0	600 0 0	737	626	633	1,025	..	192	..
60				Kothela ..	1,060 0 0	991 8 0	536 8 0	643	653	659	1,923	..	609	..
61				Vains ..	..	..	..	19	18	17	351	..	292	..
62				Mahra ..	..	..	..	432	369	359	977	..	341	..
63				Bet Jhok ..	323 0 0	350 0 0	100 0 0	127	127	119	1,058	..	354	..
64				Bet Methal Shah ..	..	..	..	487	723	725	2,127	..	360	..
65				Gudpur ..	563 0 0	484 0 0	496 0 0	767	737	798	1,153	..	459	..
66				Bet Hosini ..	219 0 0	253 0 0	353 0 0	492	673	673	2,064	..	662	..
67				Bet Pir Katal ..	..	170 0 0	80 0 0	276	293	293	402	..	15	..
68				Seri Miani ..	88 0 0	60 0 0	50 15 0	106	120	111	216	..	12	..
69				Khalpur ..	..	87 0 0	97 0 0	228	214	269	1,404	..	619	..
70				Bhanna ..	..	..	..	100	127	127	1,358	..	643	..
71				Chak Jalpur ..	..	..	..	287	309	284	853	..	15	..
72				Tor Panjani ..	760 0 0	440 0 0	..	714	805	820	1,174	..	64	..
73				Panjani (Khas) ..	..	..	..	69	175	160	399	..	59	..
74				Jalpur ..	..	..	130 0 0	439	478	455	1,036	..	63	..
75				Miran Mulla ..	..	..	..	167	148	144	176	..	12	..
76				Kalipur ..	..	..	230 0 0	996	1,054	1,027	1,662	..	78	..
77				Khorwala ..	103 3 0	80 0 0	40 0 0	40	96	89	95	..	3	..
78				Hamsadpur ..	..	..	..	37	36	36	847	..	501	..
79				Rajapur ..	..	..	..	4	6	6	36	..	..	..
80				Sheikhpur Shomali ..	..	..	..	..	..	..	379	..	78	..
81				Wandar ..	..	..	..	..	10	10	91	..	69	..
82				Khanpur Nau ..	..	..	..	2	8	3	92	..	59	..
83				Duddi ..	..	..	..	..	..	..	427	..	234	..
Total ..					38,026 5	937,009 10	331,910 7 0	39,971	40,211	40,541	90,490	54	20,861	5,083

IV—continued.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS.
Uncultivated		Cultivated			Total malguzari lands	Total area	Total malguzari lands	Total land under cultivation	Grazing jama	Date jama	Grand Total	
Culturable waste	Lately aban- doned	Irrigated	Unirrigated	Total								
12	5	7	21	28	48	0 10	4 0 10	4 1 1 9	..	..	31	
271	186	586	1,141	1,727	2,181	0 15	2 0 15	1 1 0 3	46	10	2,230	
467	60	478	868	1,346	1,873	0 11	10 0 14	2 1 3 9	52	5	1,718	
303	20	28	319	347	670	0 7	8 0 9	9 1 2 10	24	..	432	
314	74	490	471	961	1,289	0 13	9 0 14	6 1 4 10	38	9	1,240	
629	53	15	718	733	1,417	0 7	10 0 9	8 1 2 8	68	..	925	
533	61	271	754	1,025	1,619	0 11	0 0 12	0 1 3 0	60	3	1,280	
742	4	..	163	163	909	6 3	0 0 3	3 1 2 6	37	..	220	
451	61	179	321	500	1,012	0 10	8 0 11	10 1 8 0	26	2	778	Though the circumstances of this village required a reduction still it was not necessary to go as low as revenue rates. The river has retired to a distance and the assessment will be a fixed one.
357	52	319	119	438	817	0 12	9 0 13	3 1 9 7	21	5	727	Proprietors well off. The river had retired to a distance both rain and kharif grown. The jama will be fixed, not fluctuating.
867	14	6	378	384	965	0 8	9 0 7	5 1 2 7	35	..	480	
121	12	4	348	352	488	0 11	2 0 13	4 1 2 6	7	..	414	
620	3	..	410	410	1,032	0 7	2 0 7	4 1 2 6	31	..	565	
198	48	151	225	376	622	0 10	7 0 11	11 1 3 3	8	1	475	
291	28	20	148	168	490	0 5	6 0 6	8 1 3 5	16	8	228	
324	21	254	234	488	833	0 9	11 0 12	2 1 4 9	17	32	692	
829	26	169	291	460	1,314	0 4	8 0 6	10 1 3 5	43	..	602	
48	..	..	16	16	59	0 0	9 0 4	7 1 1 0	..	..	17	
306	11	..	319	319	636	0 5	11 0 9	0 1 2 0	16	..	375	
601	..	13	90	103	704	0 1	10 0 2	8 1 2 6	15	..	154	
1,126	8	..	627	627	1,761	0 5	5 0 6	7 1 2 6	71	..	796	
17	3	53	621	674	694	0 11	11 1 2	6 1 2 5	..	..	798	
898	29	..	682	682	1,502	0 5	3 0 7	2 1 2 6	60	..	733	
150	11	28	218	246	387	0 11	8 0 12	1 1 3 1	7	..	300	
92	7	..	104	104	203	0 8	3 0 8	9 1 1 1	6	..	116	
607	1	6	171	177	785	0 2	5 0 4	3 1 2 11	15	..	221	
705	..	..	110	110	815	0 1	6 0 2	6 1 2 6	20	..	147	
865	6	..	267	267	838	0 5	4 0 5	5 5 1 0	35	..	319	
354	8	68	680	748	1,110	0 11	2 0 11	8 1 1 6	25	..	815	
181	8	..	151	151	340	0 6	5 0 7	6 1 0 11	9	..	169	
516	67	38	352	390	973	0 6	9 0 7	2 1 1 10	20	..	455	Much exposed to river action. One of the pakka wells has silted up and has been thrown out of work.
36	1	..	128	128	164	0 13	1 0 14	1 1 2 0	2	..	146	
650	42	60	832	892	1,584	0 9	11 0 10	4 1 2 5	40	..	1,967	
16	1	20	55	75	92	0 15	0 0 15	6 1 3 0	..	..	89	
313	..	..	31	31	246	0 0	8 0 1	8 1 2 7	16	..	52	
31	..	..	6	6	36	0 2	8 0 2	8 1 3 2	2	..	8	
301	..	..	..	..	801	..	..	..	15	..	15	
4	9	..	9	9	22	0 1	9 0 7	3 1 1 9	..	..	16	
30	..	..	3	3	35	0 0	6 0 1	5 1 0 0	2	..	5	
192	..	..	..	..	192	..	..	..	20	..	10	
29,262	2,024	9,758	22,543	32,301	63,870	7	8	10	2	1	4	1,766
												1,607
												43,314

Though the circumstances of the village required a reduction still it was not necessary to go as low as revenue rates. The river has retired to a distance and the assessment will be a fixed one.

Proprietors well off. The river had retired to a distance both north and south. The jama will be fixed, not fluctuating.

Much exposed to river action. One of the *pukka* wells has silted up and has been thrown out of work.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Khalisah, shared or jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhat		
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Danen	Government rakh
				84 Bet Ludda ..	..	7 0 0	7 0 0	112	91	96	1,599	..	3	1,081
				85 Bet Wahdad Kholang ..	877 0 0	860 0 0	350 0 0	772	798	757	3,866	..	1,981	..
				86 P. S. W. N. with Ghak Nandiwala ..	..	..	24 0 0	24	112	72	121	..	15	..
				87 Nurra Abrind ..	367 3 6	450 0 0	350 0 0	651	692	661	3,512	..	1,529	..
				88 Khulung ..	280 6 9	380 0 0	300 0 0	925	777	823	2,711	..	412	..
				89 Kamal Kurul ..	436 0 0	474 0 0	400 0 0	491	419	369	638	..	81	..
				90 Yara Joya ..	894 13 0	85 0 0	36 0 0	957	855	885	2,307	..	122	..
				91 Bet Gurmani ..	..	10 0 0	20 0 0	141	121	121	319	..	114	..
				92 Samana Dauna ..	..	65 0 0	65 0 0	458	422	418	726	..	214	..
				93 Seri Kacha ..	287 13 3	..	..	110	104	104	278	..	21	..
				94 Muhammad Dala ..	..	..	..	19	2	9	608	..	..	587
				95 Kacha Kijhar ..	..	132 2 3	132 2 3	796	724	724	2,082	..	136	..
				96 Chak Dhomdr ..	..	..	..	53	38	40	59	..	1	..
				97 Ahmad Mahana ..	..	170 0 0	100 0 0	1,153	904	960	7,659	..	49	2,436
				98 Bet Baitwala ..	..	..	..	313	297	297	1,973	..	314	..
				99 Kutab Abrind ..	779 8 3	401 12 0	380 5 0	790	694	673	2,322	..	402	..
				100 Chak Zaurwala ..	..	41 3 0	..	47	32	36	51	..	2	..
				101 Malho Kuria ..	148 2 6	201 5 9	106 0 0	271	275	274	778	..	185	..
				102 Chak Kutab Abrind ..	109 13 3	88 4 0	69 11 0	70	56	56	50	..	9	..
				103 Chak Malho Kuria ..	73 0 6	118 11 0	94 0 0	94	84	78	56	..	6	..
				104 Chak Omad Shah ..	..	187 7 3	45 0 0	105	93	98	288	..	21	..
				105 Chak Malana ..	..	25 6 6	9 0 0	10	8	9	41	..	12	..
				106 Darin ..	1,992 7 6	1,610 0 0	1,150 0 0	1,686	2,423	2,275	6,613	..	1,178	..
				107 Kabul Chhajra ..	..	5 0 0	3 0 0	86	94	94	279	..	58	..
				108 Futeh Muhammad Abrind ..	94 7 6	110 0 0	20 6 0	371	351	305	3,330	..	1,049	..
				109 ..	..	..	..	..	..	..	..	..	..	..
				169 Bet Mailla ..	..	..	..	24	33	28	2,294	..	1,561	..
				110 Bet Kaim Shah ..	630 0 0	300 0 0	250 0 0	614	592	573	6,149	..	1,456	1,859
				111 Bhindli Sulman Shah ..	..	..	..	117	207	195	6,729	..	3,048	..
				412 Bet Chin ..	..	..	..	173	165	154	6,238	..	2,263	..
				113 Maado ..	688 0 0	700 0 0	550 0 0	918	769	767	6,205	..	1,550	..
				Total ..	7,558 11 6	6,392 3 6	4,411 2 3	12,312	12,104	11,878	67,895	..	18,785	5,963

MUZAFFARGARH TAHSIL.
BET INDUS.
KHALISAH

IV.—continued.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS.
Uncultivated		Cultivated			Total malguzari lands	Total area	Total malguzari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
Culturable waste	Lately aban- doned	Irrigated	Unirrigated	Total								
427 1,190	10 70	45 390	33 249	78 645	615 1,905	2 11 0 3 10 6	3 0 1 6 4 1	3 8 2 9	40 57	.. 7	138 821	Assessed below rates because of the inferior quality of canal irrigation which is little better than sailaba, and on account of the poverty of the people.
20	6	80	..	80	106	9 6 0	10 6 0	14 5	..	..	32	I could not assess higher because the great increase could not have been borne at once.
1,458 1,568 236	54 22 36	828 401 241	143 308 44	471 709 285	1,983 2,299 551	2 7 0 4 10 0 0 3 0	4 6 1 5 9 1 10 7 1	3 1 2 7 4 9	40 72 24	.. 9 10	664 994 403	Soil inferior rapid and kolar, a people poor.
1,327 84 89 129 ..	57 5 5 17 19	293 31 132 3 2	508 82 266 108 ..	801 116 418 111 2	2,186 205 512 257 21	6 2 0 6 1 0 9 10 0 6 0 0 6 10 0	6 6 1 9 5 0 14 0 1 6 0 0 6 10 4	1 8 0 8 1 2 15 0 8 0	62 16 16 7 ..	.. .. .. .. ..	947 137 461 111 9	This village contained only 21 acres of cultivation. It was an accident that it was not cultivated at measurement.
1,164 21 4,280 1,350 1,223 21 318 9 2 185 20 3,556 121 1,782	54 3 44 7 87 .. 26 .. 4 .. 144 6 124	164 16 106 54 182 19 146 33 48 24 .. 1,167 5	564 18 794 250 428 9 95 51 .. 668 89	728 34 900 304 610 28 241 32 48 75 9 1,735 94 375	1,946 58 5,171 1,661 1,926 43 585 41 561 264 23 5,438 221 2,281	5 7 0 10 10 0 2 11 0 2 5 0 4 8 0 11 0 0 5 8 0 1 11 1 6 3 2 5 5 0 3 6 0 5 6 0 5 5 0 6 10 1 1 6 0	5 11 0 0 1 2 3 0 1 2 10 0 5 7 1 11 5 1 7 0 1 5 10 1 2 0 1 5 11 1 5 0 1 8 1 5 6 10 1 2 29 13	15 11 0 1 1 10 15 8 1 8 4 0 2 2 12 0 10 0 4 11 0 0 5 0 0 0 0 0	55 1 26 40 59 .. 15 .. 8 .. 167 51 20	.. .. .. .. 114 3 2 21 28 5 .. 60 ..	779 41 1,050 337 840 38 291 74 106 112 9 2,502 59 325	For some years the lands have been deteriorating. Proprietors' patta and present patta collected with difficulty.
708	..	..	35	35	73	0 0 2	0 7 9	12 10	16	..	44	Much exposed to river action, only samuka was grown in the year of measurements.
2,266 2,455	50 12	262 16	256 189	518 214	2,834 2,681	2 2 0 0 6 0	3 3 1 1 2 0	1 8 14 5	101 55	4 ..	681 24	This village is much exposed to river action, being sometimes on one bank of the Indus, sometimes on the other.
2,784 2,806	15 168	.. 255	176 427	176 682	2,975 3,655	0 5 0 2 4 0	0 10 4 3 4 1	0 0 2 0	102 89	.. ..	256 817	
31,648	1,945	4,479	6,075	10,554	43,147	0 3 1	0 4 5	1 2 0	1,138	265	13,299	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Khalisah, share, or jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Mihail		
					1st Settlement	2nd Settlement	3rd Settlement					Lakhraji	Bacon	Government rakh
			114	Dera Fazil ...	444 14 0	444 13 6	275 0 0	275 0 0	852	700	3,762	...	105	1,823
			115	Maksadpur ...	771 14 0	854 12 0	784 0 0	925 0 0	1,236	1,300	2,011	...	64	...
			116	Dewana Bahadur ...	342 7 0	376 12 6	350 0 0	290 0 0	428	428	692	...	18	...
			117	Dewana P. Rajan ... Bakhal	383 13 0	414 6 0	350 10 0	350 0 0	274	346	517	...	12	...
			118	Jallpur Dedur ...	128 4 0	198 3 0	198 0 0	198 0 0	177	198	359	...	9	...
			119	Amirpur Kanakka ...	982 0 0	1,149 0 0	950 0 0	1,461 0 0	1,457	1,457	2,293	...	256	...
			120	Amirpur Farbana ...	663 8 0	938 1 0	83 8 0	1,004 0 0	1,089	1,089	3,017	62	363	...
			121	Kri Ali Mardau ...	359 5 3	363 13 6	296 0 0	325 0 0	446	373	4,116	3	2,074	1,004
			122	Rahmmana Allah Ditta	246 10 6	277 0 0	252 0 0	252 0 0	379	379	535	...	52	...
			123	Chak Nashebi Muhammad Azam-yala	219 10 0	345 11 0	346 0 0	346 0 0	307	346	876	...	540	...
			124	Brahmapur ...	862 4 6	1,230 0 0	1,007 0 0	1,021 0 0	965	1,021	1,753	4	735	...
			125	Ararpur ...	492 0 0	500 0 0	350 0 0	350 0 0	497	497	541	...	37	...
			126	Rahmmana Ziadat	313 5 0	431 3 0	348 0 0	348 0 0	448	448	523	...	47	...
			127	Khokhra Shujawal	12 0 0	40 0 0	55 0 0	264 0 0	305	340	561	...	26	...
			128	Chabutra Kanak	1,120 2 0	1,250 0 0	1,200 0 0	1,252 0 0	1,269	1,269	1,453	8	132	...
			129	Balkana ...	352 0 0	502 0 0	502 0 0	502 0 0	543	543	855	...	481	...
			130	Belil ...	656 13 6	718 0 0	637 0 0	451 0 0	645	551	1,491	...	908	...
			131	Kotha ...	473 0 0	550 0 0	450 0 0	455 0 0	381	382	958	...	20	456
			132	Thori ...	496 0 0	426 0 0	400 0 0	395 0 0	409	409	1,196	...	643	...
			133	Kotla Sadat ...	900 0 0	890 0 0	650 0 0	599 0 0	588	417	1,548	...	253	666
			134	Taraf ...	1,227 0 0	869 11 0	686 0 0	585 0 0	488	510	1,149	...	353	...
			135	Fateh Surani ...	800 0 0	1,056 0 0	1,089 0 0	1,089 0 0	1,387	1,206	2,828	...	672	...
			136	Karimdad Kureshi	1,223 0 6	968 5 6	858 11 0	858 11 0	1,423	1,314	5,319	...	239	1,201
			137	Galab Ghurmani	967 4 0	889 6 3	743 0 0	748 0 0	1,000	1,060	1,592	...	630	...
			138	Chak Dedur ...	266 8 8	374 4 5	363 0 0	356 0 0	352	368	840	...	20	...
				Total ...	14,679 14 8	16,021 7 5	13,016 3 0	14,700 1 0	17,642	17,463	40,556	77	8,789	4,550

IV—continued.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						Assessment per acre on			Add to column 11 Grating and date assessment			REMARKS.
Uncultivated		Cultivated			Total malguzari land	Total area	Total malguzari land	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
Culturable waste	Lately aban- doned	Irrigated	Unirrigated	Total								
1,522	16	494	302	736	2,334	0 4 7	0 4 10	14 1	61	50	314	The only reason for not assessing up to revenue rates in this village was that the former jama was so low.
801	4	629	513	1,142	1,947	0 10 4	0 10 8	2 3	61	24	1,388	
321	7	274	72	316	674	0 9 11	0 10 2	3 10	13	10	451	
227	36	157	85	242	505	0 10 8	0 11 0	6 11	11	...	357	Proprietors well off and get other income. Village cultivated by tenants who pay a very high rate of rent, viz. 4 by 2½ acres in the mound. Therefore, I maintained the present jama though above revenue rates.
205	5	88	52	140	350	0 8 10	0 9 1	6 8	8	2	208	Soil good. Area of waste. Hence I maintained the present jama though above revenue rates.
312	130	405	1,090	1,195	1,357	0 10 2	0 12 0	15 4	36	...	1,493	
1,113	36	872	571	1,443	2,592	0 8 11	0 10 5	2 9	60	33	1,782	
665	21	327	21	348	1,034	0 11 0	0 6 9	1 2	27	3	405	Soil inferior rapar and kalar. Proprietors very poor. It was not possible to take a greater increase than I have taken.
154	1	230	98	328	483	0 11 10	0 13 2	3 4	12	8	417	
59	11	145	123	263	336	0 6 4	0 6 1	4 10	9	7	362	Soil fairly good and proprietors well off. Former jama maintained though above revenue rates.
320	9	572	103	675	1,014	0 9 4	0 1 1	8 2	42	21	1,087	Soil fairly good, owners well off and jama collected with ease. Plenty of room for improvement. The Government rakh having been released. Hence I maintained the present jama though above revenue rates.
68	3	295	138	433	501	0 14 8	0 15 9	2 4	...	4	504	
73	12	290	90	389	476	0 13 8	0 15 1	2 5	...	4	482	
22	1	102	210	312	335	0 15 1	0 3 1	1 5	...	...	340	A superior village with good soil and crops. Owners well off.
225	37	748	305	1,051	1,313	0 14 0	0 15 6	3 4	29	60	1,351	
14	18	328	14	342	371	0 10 2	1 7 5	9 5	10	30	583	
73	104	370	36	406	585	0 4 10	0 12 5	1 9	7	10	468	Soil inferior rapar and kalar. Proprietors poor. Three-fourths of the village mortgaged. The jama was reduced to Rs 451 in 1874-75. It is not possible to raise it again.
114	5	238	65	303	452	0 12 11	0 13 6	4 2	6	...	383	
225	10	281	25	309	533	0 5 6	0 11 10	5 2	10	4	423	
401	27	259	43	268	729	0 6 10	0 9 2	6 5	30	8	455	
405	21	296	70	366	796	0 7 10	0 10 5	6 4	25	12	547	
868	96	626	566	1,192	2,156	0 6 9	0 8 11	0 1	38	2	1,240	Soil inferior kalar. Land recorded as canal area is really salaba. Owners have impoverished themselves by loans and by coming within reach of the criminal law. I could not assess higher.
2,517	218	650	434	1,084	3,879	0 5 1	0 5 5	3 5	80	15	1,409	
309	17	618	19	637	963	0 10 8	1 7 1	10 7	26	9	1,093	
413	70	153	184	337	820	0 7 0	7 2 1	1 6	19	...	387	
11,505	954	9,453	5,227	14,630	27,139	0 6 11	0 10 4	3 0	619	319	18,401	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Name of Tahsil				Assessment Circle	Khalisah, shared or Uqar	Serial No.	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Minhai		
Village							1st Settlement	2nd Settlement	3rd Settlement				Total area	Lakhira	Baran	Government rakh
CHAHIL															
KHALISAH															
139	Sulh	..	139	125 0 0	160 0 0	130 0 0	138 0 0	166	166	5,978	..	1,212	4,153		
140	Chak Faraz Shoh	..	140	98 7 9	113 5 0	83 0 0	89 0 0	85	89	1,431	..	601	245		
141	Muhammad	..	141	446 5 6	486 2 6	353 0 0	353 0 0	283	300	5,314	..	1,750	2,456		
142	Kandiwal	..	142	62 3 6	180 0 0	150 0 0	150 0 0	121	124	398	..	128	..		
143	Chahwala	..	143	630 14 9	845 5 0	773 0 0	671 0 0	686	686	5,808	..	3,853	1,166		
144	Dera	..	144	349 0 0	354 5 0	206 0 0	206 0 0	144	144	901	..	10	476		
145	Khumal Sandila	..	145	676 2 2	794 14 2	646 0 0	667 0 0	716	716	20,594	24	10,575	8,590		
146	Khaupur	..	146	201 0 0	263 0 0	224 0 0	259 0 0	381	303	18,448	..	2,234	12,804		
147	Sultan Khar	..	147	67 13 0	63 12 6	42 0 0	57 0 0	55	57	734	..	27	327		
147	Shahid Bari	..	147	67 13 0	63 12 6	42 0 0	57 0 0	55	57	734	..	27	327		
Total				2,616 15 3	3,248 12 3	2,633 0 0	2,600 0 0	2,637	2,585	69,756	24	20,890	30,207		
CHAHIL															
148	Sharif Dwarwar	..	148	208 0 0	291 0 0	184 0 0	290 0 0	231	231	6,328	..	800	2,766		
149	Fazil Kalra	..	149	333 0 0	343 0 0	283 0 0	293 0 0	244	245	14,385	..	3,108	10,030		
150	Muhammad Baksh Khoawar	..	150	183 0 0	225 0 0	108 0 0	108 0 0	121	100	1,405	..	111	646		
CHAHIL															
151	Umar Buth	..	151	106 5 0	133 8 0	60 0 0	111 0 0	72	60	1,762	..	492	312		
CHAHIL															
152	Fatuli Buth	..	152	37 9 3	47 8 0	50 0 0	50 0 0	8	8	66	..	18	..		
153	Sharif Buth	..	153	64 0 0	94 0 0	77 0 0	77 0 0	81	55	557	..	111	..		
CHAHIL															
154	Baghwal Cholistan	..	154	172 0 0	188 0 0	165 0 0	165 8 0	200	180	3,707	..	1,678	1,659		
CHAHIL															
156	Fatch Allwala	..	156	177 0 0	267 0 0	308 0 0	308 0 0	280	280	702	..	362	..		
156	Rodariwala	..	156	857 0 0	1,055 0 0	913 0 0	943 0 0	725	725	1,543	..	868	..		
157	Sherwala	..	157	0 5 0	58 0 0	44 0 0	44 0 0	32	32	56	..	1	..		
158	Sohani Chhokra	..	158	88 0 0	92 0 0	84 0 0	84 0 0	62	62	96	..	47	..		
159	Shomali	..	159	308 0 0	401 0 0	311 0 0	341 0 0	401	401	547	..	45	..		
160	Panjaliwala	..	160	110 0 0	152 0 0	129 0 0	129 0 0	128	129	153	..	53	..		
CHAHIL															
161	Tilhi Bura Ghush	..	161	475 0 0	597 0 0	437 0 0	439 0 0	493	437	517	..	129	..		
162	Narain Saigal	..	162	136 0 0	180 0 0	125 0 0	125 0 0	135	125	228	..	60	..		
163	Sherkh Masa	..	163	184 0 0	206 0 0	184 0 0	184 0 0	219	219	321	..	158	..		
163	Khadifa	..	163	184 0 0	206 0 0	184 0 0	184 0 0	219	219	321	..	158	..		
164	Ranjha Bilyani	..	164	78 1 3	100 0 0	60 0 0	60 0 0	61	61	114	..	62	..		
165	Jada Chauda	..	165	309 0 0	261 0 0	291 0 0	291 0 0	220	220	310	..	125	..		
166	Chhitta Dhab	..	166	145 8 6	177 13 5	153 0 0	153 0 0	109	109	172	..	79	..		
167	Bhimewala	..	167	342 0 0	386 0 0	292 0 0	292 0 0	255	256	226	..	41	..		
168	Mozha Braija	..	168	150 0 0	148 0 0	140 0 0	140 0 0	95	98	109	..	34	..		
169	Kalanjar	..	169	52 0 0	172 0 0	198 0 0	198 0 0	231	231	237	..	47	..		
170	Ganbar Jancia	..	170	166 0 0	236 0 0	257 0 0	243 0 0	250	250	357	..	152	..		
171	Shah Muhammad Janubi	..	171	231 0 0	255 0 0	218 0 0	218 0 0	287	218	446	..	94	..		
Carried over															

IV—continued.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAMIR						Assessment per acre on			Add to Column 11 Grain and date assessment			REMARKS.
Uncultivated.		Cultivated.			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands Bona	Date 2nd A	Grand Total	
Culturable waste	Lately aban- doned	Irrigated	Unirrigated	Total								
459	21	133	..	133	615	0 1 5 0 4 1 1 4 0	10	..	182			
495	19	62	9	71	885	0 1 2 0 2 5 1 4 1	29	..	115			
876	77	216	..	216	1,168	0 1 8 0 4 1 1 6 3	2	..	437			
159	12	89	10	99	279	0 5 0 0 7 4 1 4 0	19	..	134			
180	120	427	72	499	799	0 2 4 0 13 9 1 6 0	4	..	728			
342	48	115	..	116	605	0 4 6 0 4 7 1 4 0	21	36	291			
859	87	479	..	479	1,405	0 0 11 0 8 2 1 7 11	50	139	345			
3,082	14	284	50	314	3,416	0 0 10 0 1 5 0 15 5	50	..	355			
1,336	..	44	..	44	380	0 2 3 0 2 5 1 4 9	16	..	75			
6,767	298	1,849	121	1,970	9,135	0 1 5 0 4 6 1 5 0	258	216	3,058			
1,560	30	164	..	164	1,734	0 1 5 0 2 1 1 6 6	16	..	217			
1,029	8	210	..	210	1,247	0 0 11 0 3 2 1 2 8	13	..	258			
612	69	88	..	88	750	0 1 10 1 2 2 1 2 2	8	..	108			Has deteriorated since measure- ments. Three wells out of the five have become waste. Soil poor. Canal supply deficient.
908	..	50	..	50	958	0 0 7 0 2 10 1 0 0	15	..	63			Very much deteriorated in conse- quence of lands and deficient canal supply. Wells in work decreased from six to two. Seventeen wells out of gear.
43	..	5	..	5	480	0 1 11 0 2 8 1 9 7	..	..	8			
362	..	54	..	54	416	0 1 7 0 2 1 1 0 4	5	..	64			Circumstances similar to Umar Badi No. 151. Only one well at work and that and another waste well are mortgaged.
229	3	147	..	147	379	0 1 5 0 7 7 1 8 7	6	..	186			Soil poor and bad. People in debt. Canal supply deficient till 1876, when it improved but, the village has not yet recovered.
131	20	189	..	189	340	0 6 5 0 13 2 1 7 8	7	..	287			
148	50	489	..	489	687	0 7 6 1 0 11 1 7 9	25	..	318			
33	..	21	..	21	540	0 9 4 0 9 6 1 8 5	..	..	52			
5	2	42	..	42	490	0 10 4 1 3 3 1 7 7	..	..	62			
229	7	275	..	275	502	0 11 9 0 12 9 1 7 4	6	1	408			A very inferior village in the Thal. Lands high and canal water does not reach them.
32	21	87	..	87	110	0 10 8 0 14 9 1 7 5	..	..	139			
44	22	329	..	329	395	0 13 6 1 1 8 1 5 3	..	8	439			
47	29	92	..	92	168	0 8 9 0 11 11 15 9	..	2	127			
27	4	152	..	152	183	0 10 11 1 3 2 1 7 1	..	6	225			
17	1	44	..	44	62	0 8 7 0 15 9 1 6 2	..	..	61			
16	21	148	..	148	185	0 11 4 1 3 6 1 7 9	..	..	226			
1	16	76	..	76	93	0 10 2 1 2 9 1 6 13	..	..	109			
9	1	175	..	175	185	0 11 6 2 1 7 5	..	..	256			
7	3	65	..	65	75	0 14 6 1 4 11 1 8 1	..	..	98			
25	..	155	..	155	190	0 15 7 1 3 5 1 7 19	..	3	231			
24	14	167	..	167	205	0 11 2 1 3 6 1 7 11	..	4	251			A village consisting of 8 wells in the Thal. All very poor except one. Has suffered much from insufficient canal supply. Present game collected with difficulty. It could not be increased.
147	11	194	..	194	352	0 7 10 0 9 11 1 7 0	8	8	251			

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Khalsah, shared or Jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhat		
					1st Settlement	2nd Settlement	3rd Settlement					Lakhraj	Danen	Government rakh
				Brought forward										
			172	Wan Petal ..	1,061 0 0	1,282 0 0	1,065 0 0	1,065 0 0	951	951	1,171	..	462	..
			173	Gadara ..	1,110 0 0	1,035 0 0	923 0 0	920 0 0	807	807	902	..	317	..
			174	Siddhanwali ..	1,807 0 0	1,245 0 0	1,870 0 0	1,870 0 0	1,710	1,600	6,102	..	2,142	1,973
			175	Tibbi Bara Sharki	183 0 0	272 0 0	195 0 0	196 0 0	270	230	1,790	..	554	996
			176	Nar Kutra ..	940 0 0	1,114 0 0	783 0 0	783 0 0	880	788	8,113	..	2,171	5,221
			177	Sabzu Jat ..	939 0 0	1,008 0 0	745 0 0	745 0 0	826	745	6,151	..	2,407	2,886
			178	Basira ..	1,116 2 6	1,431 6 3	1,098 0 0	1,095 0 0	1,121	1,121	2,869	..	1,921	..
			179	Gulwala ..	369 6 3	504 7 0	415 0 0	415 0 0	333	334	557	..	275	..
			180	Abmad Surani ..	52 13 6	63 0 0	52 0 0	52 0 0	65	66	86	..	45	..
			181	Dadanwala ..	100 0 0	97 0 0	80 0 0	80 0 0	85	85	127	..	34	..
			182	Permewala ..	31 0 0	58 0 0	45 0 0	45 0 0	63	62	116	..	44	..
			183	Musa Malana ..	157 4 6	170 2 3	106 0 0	106 0 0	103	106	184	..	63	..
			184	Ghulam Haddar Surani ..	401 0 0	411 0 0	268 0 0	268 0 0	259	259	510	..	295	..
			185	Mutib Surani ..	315 0 0	399 0 0	209 0 0	209 0 0	242	209	415	..	122	..
			186	Ghulam Surani	546 0 0	560 0 0	298 0 0	298 0 0	272	272	644	..	168	..
			187	Kureshi Parana	551 0 0	722 0 0	567 0 0	567 0 0	613	613	1,350	..	780	..
			188	Ayab Arain ..	915 3 2	1,370 0 0	1,184 0 0	1,184 0 0	965	1,081	1,746	..	728	..
			189	Sher Shah ..	159 8 2	190 0 0	160 0 0	162 0 0	129	129	188	..	90	..
			190	Yara Dahi ..	685 0 0	709 0 0	589 0 0	589 0 0	475	500	966	..	434	..
			191	Haidar Dasti ..	112 7 3	139 0 0	100 0 0	100 0 0	86	87	130	..	54	..
			192	Aliwali ..	1,021 13 6	1,290 15 3	1,071 0 0	1,071 0 0	1,233	1,233	5,561	..	2,850	1,197
			193	Kherowala ..	34 1 2	62 8 6	52 0 0	52 0 0	79	79	177	..	105	..
			194	Mahbubwala ..	381 0 0	633 8 0	551 0 0	551 0 0	678	600	1079	..	438	..
			195	Dehriwala ..	91 13 6	239 12 9	181 0 0	181 0 0	159	159	174	..	46	..
			196	Amad Dewala	236 10 2	277 9 3	207 0 0	207 0 0	187	187	641	..	370	..
			197	Ghulam Paribar	450 3 3	501 1 0	403 3 8	403 3 8	318	319	667	..	297	..
			198	Gul Kaba Mustoi	2,469 0 0	2,663 0 0	2,151 0 0	2,150 0 0	1,825	1,900	3,433	..	1,258	..
			199	Zabti Kureshi ..	246 0 0	147 0 0	99 0 0	99 0 0	110	70	197	..	28	..
			200	Van Wali ..	67 5 6	91 10 6	109 0 0	102 0 0	102	109	108	..	19	..
				Carried over ..										

MUZAFFARGARH TAHSIL.
TAHSE CHAHIL NABHI.
KHALSAH.

IV.—continued.

16	17	18	19	20	21	22	23	24	25	26	27	28				
MALGUZARI INCLUDING JAGIR						Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS.				
Uncultivated		Cultivated		Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands jama	Date jama	Grand Total						
Culturable waste	Lately aban- doned	Irrigated	Unirrigated													
26 6 765	27 2 125	656 541 1,157	.. .. ..	656 541 1,157	709 553 1,287	13 14 6	0 1 2	0 7 12	1 3 11	7 10 6	2 2 21	966 812 1,625	This village has suffered from continuous failure of canals, which has left it very ruined. Mortgage very numerous. Land is mortgaged for Rs. 12,612. Considerable relief was essential.		
40	20	180	..	180	246	4	8	0	15	4	1	4	5	232	On the tail of the Bhakri Canal, and has suffered from deficient canal supply. People poor and in debt, but unusually industrious. I could not increase up to revenue rates.	
99	14	608	..	608	721	0	4	4	1	5	1	4	7	793	Exactly similar to the last, except in the industry of the people.	
256	73	577	..	577	906	0	3	7	0	13	2	1	8	761	Exactly similar to the two last which it adjoins.	
144 46 1 33 25 46	40 7 2 3 3 4	761 229 38 59 41 71	.. .. .. .. .. ..	761 229 38 59 41 71	948 282 410 929 729 1210	0 9 10 10 8 9	6 7 5 9 8 5	3 7 5 14 14 5	2 1 1 7 6 11	7 4 7 7 6 11	14 4	2	1,137 338 56 85 63 106		
29 118	8 9	178 166	.. ..	178 166	216 263	0 8	2 1	3 1	3 1	1 5	1 1	1 4	3 2	262 217	This village suffered much from irregular and deficient canal supply. The western part of the village consists of bad kallar soil.
349 122 350	3 37 4	181 417 664	181 417 664	536 676 1,908	0 7 9	6 3 1	9 1 1	8 1 0	1 1 1	7 6 10	8 6 1	15 4 14	4 3 7	291 629 1,103	This village required relief in consequence of failure of the Thal-wah, but it was not necessary to go as low as revenue rates.
3 99 14 615 11 291 18 135 151 994	5 104 1 43 6 29 2 12 23 36	90 324 61 863 55 400 108 125 216 1,142	.. .. .. .. .. .. .. .. .. 3	90 324 61 863 55 400 108 125 216 1,142	98 632 769 1,521 720 611 128 272 370 2,173	0 8 10 4 7 0 0 9 7 8	4 3 10 10 2 8 11 4 8 10	0 15 8 13 1 15 3 11 13 10	1 0 2 0 1 0 1 7 11 8	6 8 10 8 9 6 7 7 11 8	.. 7 .. 16 .. 15 .. 4 7 60	2 3 1 7 26	130 514 88 1,256 79 614 159 181 226 1,976	Relief was necessary in consequence of canal failure. Floods and deterioration since measurements, but the village is decidedly above the average, and it was not necessary to go as low as revenue rates.	
82	3	74	..	74	159	0	5	8	0	7	1	9	15	2	70	Only two within this village. The masonry of one is ruined. Canal supply failed. Measurements were made at an unusually favorable time, for the village is much worse than would seem from the papers.
13	3	73	..	73	894	0	2	1	3	7	1	7	11	..	169	

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Khalisah, shared or jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minkat.		
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Baran	Government rakh
				Brought forward										
201				Gul Khakh ..	206 0 0	210 0 0	174 0 0	174 0 0	170	171	597	..	344	..
202				Rahau Ali Mullan	43 0 0	52 0 0	52 0 0	52 0 0	38	38	36	..	9	..
203				Sahara Chhokra										
				Janabi ..	15 12 9	20 0 0	15 0 0	15 0 0	17	17	39	..	6	..
204				Hitarwala ..	53 9 6	51 9 3	41 0 0	41 0 0	68	68	101	..	48	..
205				Sharif Dewala ..	192 0 9	259 12 6	194 0 0	194 0 0	116	130	311	..	162	..
206				Bilocha Surani..	83 5 0	80 0 0	50 0 0	50 0 0	38	38	244	..	206	..
207				Bhadwala ..	20 14 9	32 2 3	31 0 0	31 0 0	27	27	21	..	3	..
208				Ali Dala ..	1,906 6 9	1,737 11 6	1,441 0 0	1,447 0 0	1,422	1,447	2,435	..	669	..
209				Setbewala ..	77 3 0	76 8 6	101 0 0	101 0 0	102	102	162	..	67	..
210				Gndarewala ..	79 14 6	154 13 0	126 0 0	134 0 0	174	174	267	..	104	..
211				Nara Kureshi ..	71 6 0	110 0 0	90 0 0	90 0 0	107	107	172	..	76	..
212				Gulab Shah ..	157 10 9	204 5 3	211 0 0	211 0 0	283	283	506	..	231	..
213				Jayewala ..							71	..	7	..
214				Chak Nurewala..	43 8 9	34 4 0	27 0 0	27 0 0	15	15	113	..	84	..
215				Pakka ..	9 1 9	2 4 0	2 0 0	2 0 0	5	3	7	..	..	..
216				Sanwal Syad ..	96 0 0	100 0 0	80 0 0	80 0 0	108	80	188	..	32	..
217				Dahewala Mahra	123 6 6	118 15 0	96 12 4	96 12 4	78	78	100	..	36	..
218				Bahadar Malwa	197 14 9	258 5 6	241 0 0	241 0 0	230	230	420	..	105	..
219				Jhalarin 2nd ..	144 3 9	156 15 0	97 0 0	97 0 0	78	85	63	..	9	..
220				Maltewala ..	75 14 3	66 1 6	52 0 0	52 0 0	47	47	62	..	28	..
221				Maharshah ..	215 2 6	243 2 0	218 0 0	218 0 0	193	194	542	..	154	..
222				Sahara Shah ..	180 8 6	220 0 0	150 0 0	150 0 0	141	14	175	..	58	..
223				Jalwala ..	31 11 6	28 12 0	18 0 0	18 0 0	28	22	64	..	40	..
224				Chak Ali Dala ..	296 7 5	759 8 6	681 0 0	712 0 0	698	698	2,198	..	1,455	..
225				Baharewala ..	99 15 6	63 5 0	57 0 0	57 0 0	47	57	58	..	15	..
226				Daulatpur ..	1,140 0 0	1,147 0 0	1,100 0 0	1,191 0 0	1,465	1,330	5,896	93	2,025	1,732
227				Gujarwala ..	65 11 9	108 8 0	128 0 0	128 0 0	141	141	373	..	173	..
228				Baghpur ..	842 0 0	681 0 0	596 0 0	596 0 0	524	530	592	..	182	..
Total ..					28,102 0 9	31,728 12 11	26,808 0 0	26,984 8 0	25,950	25,686	95,093	93	33,481	29,257

IV.—continued.

16	17	18	19	20	21	22	23	24	25	26	27	28			
MALGUZARI INCLUDING JAGIR						Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS.			
Uncultivated		Cultivated			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands Jama	Date jama	Grand Total				
Culturable waste	Lately aban- doned	Irrigated	Unirrigated	Total											
127 1	11 1	115 25	..	115 25	253 27	4 0	5 11	10 6	7 6	9 1	2 ..	174 38			
21 10	1 ..	11 46	..	11 45	33 55	7 10	0 9	8 3	3 9	8 2	..	17 68			
65 12	8 2	79 25	..	79 25	149 39	6 2	8 0	14 15	6 1	10 4	..	145 58			
..	..	18 ..	..	18 ..	181 1,709	4 9	7 6	7 13	8 1	0 0	..	20 1,479		
765 21	31 1	970 73	..	970 73	1,709 35	9 10	6 1	13 1	1 2	7 6	..	102 175			
26 17	16 6	121 73	..	121 73	163 28	10 2	6 1	1 8	1 3	7 0	..	107 289			
76 64	4 ..	195 ..	..	195 ..	275 64	8 ..	11 ..	0 ..	6 ..	7 ..	..	289 ..	
..	19 1	10 8	..	10 3	28 20	2 6	1 10	8 6	3 1	8 0	..	15 9			
66	18	72	..	72	166	6	10	8	2	1	0	80	Land high and only gets water when the canals are at their highest. Deteriorated since measurements.		
12 137	.. 17	52 161	..	52 161	64 315	12 8	6 9	1 11	8 8	0 10	..	78 239			
2 ..	..	52 ..	..	52 ..	54 330	6 12	7 2	9 2	1 6	10 9	..	85 47	
1 ..	..	32 ..	..	32 ..	330	12	2	1	6	9	7	6	198
68 21	.. 1	130 56	..	130 56	188 117	9 13	1 0	0 3	6 5	7 1	..	142 ..	Only one inferior well with a cultivated area of 19 acres. Owners poor.		
2 ..	8 ..	19 ..	..	19 ..	21 21	5 6	6 0	14 14	8 1	2 6	..	22		
200 12	5 ..	478 31	..	478 31	683 45	5 15	3 9	0 1	4 3	7 5	5 ..	705 57	Much improved. Crops and soil good, and canal water abundant.		
970	81	989	..	989	2,043	5	10	10	5	5	6	40	The village suffers much from floods which are irremediable, because they are introduced by an old bed of the Indus. People a lawless set of Chaudia Deloches, and very poor. Present jama collected with difficulty. I could not get any nearer to revenue rates.		
99 32	7 20	94 368	..	94 368	200 410	6 14	1 10	11 6	3 1	8 7	3 ..	141 551			
12,237	1,214	17,508		317,811	32,262	0	6	3	0	12	9	1	424	124	26,234

APPENDIX

[illegible]

IV.—continued.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS
Uncultivated		Cultivated			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands jama	Date jama	Grand Total	
Culturable waste	Entirely aban- doned	Irrigated	Unirrigated	Total								
2,229	21	374	28	402	2,653	3 3 70	3 10 1	9 5	112	459	1,210	This village required relief, but it was not necessary to go as low as revenue rates, for the village is above the average and most of the proprietors well off.
1,038	24	670	19	689	1,751	9 6 90	9 21 7	4	70	134	1,210	
563	14	423	24	447	1,921	0 7 90	14 6 2	1 3	40	207	1,175	
29	1	161	1	162	192	1 1 51	2 11 1	6 6	..	17	241	The village has fallen off and the people much reduced in debt; still it was not necessary to go as low as revenue rates.
540	63	263	39	302	905	9 5 60	7 41 6	1	35	82	831	
215	15	216	4	220	450	0 13 10	1 0 0	2 0 9	15	74	539	
646	63	744	124	868	1,571	9 14 70	15 11 1	13 0	35	115	1,719	Similar to the last which it adjoins.
674	37	319	8	323	1,036	9 7 11	0 8 2	1 16 1	36	90	656	
922	38	687	41	678	1,638	9 10 90	11 11 0	9	48	226	1,409	
309	25	261	..	261	590	9 12 0	0 12 7	1 12 3	17	52	558	The village required reduction because some land was thrown out of canal irrigation and the people are poor, and jama collected with difficulty. Still it was not necessary to go so low as revenue rates, for the village is above the average and has been paying much higher.
416	16	376	6	382	811	9 11 50	13 6 1	12 9	22	188	807	
209	95	177	37	211	618	9 6 90	10 5 1	9 0	15	100	451	
655	40	408	4	412	1,101	0 9 80	11 11 2	0 0	35	200	1,050	This village was wrongly placed in this circle. It should have been in the Thal, Chahi Nahiri. It consists of two inferior wells at the foot of the Thal. Land is sandy and khar. Canal supply irregular. It was impossible to raise the jama more.
252	56	41	..	41	543	0 0 10	0 2 11	1 9 0	15	43	122	
235	23	40	..	40	238	0 2 60	3 2 1	7 7	15	15	87	
909	102	1,063	34	1,097	2,108	9 13 80	15 21 13	2	61	304	2,356	This village required reduction. Sales and mortgages many, and sabha lands assessed very high. Still it was not necessary to go as low as revenue rates, for the village is a good one.
636	29	223	..	223	888	9 4 11	0 7 2	1 12 8	34	200	634	
1,134	253	709	635	1,214	2,631	9 11 0	10 5 1	6 1	69	222	1,985	
795	101	451	..	451	1,317	0 8 11	0 9 11	1 13 8	45	407	1,288	A superior village, but some wells are bad and some proprietors poor in consequence of canal failures. Some relief had to be given to these, but no further reduction was necessary, and the village is now improving.
266	2	41	..	41	508	0 1 60	2 10 15	7	5	5	60	
350	107	374	..	374	831	0 12 30	13 5 1	13 10	23	281	803	
1,122	56	453	..	453	1,031	0 7 70	8 11 13	3	59	289	1,175	This village required relief, but it was not necessary to go as low as revenue rates, for the village is above the average and most of the proprietors well off.
570	206	694	121	715	1,491	0 11 60	11 4 1	7 8	39	30	1,178	
341	214	300	212	512	1,067	0 9 10	9 4 1	3 6	28	16	667	
790	231	815	191	1,006	2,027	0 11 10	11 3 1	7 7	51	29	1,556	This village required reduction. Sales and mortgages many, and sabha lands assessed very high. Still it was not necessary to go as low as revenue rates, for the village is a good one.
263	85	343	231	674	912	0 15 30	15 9 1	9 1	17	8	925	
540	81	571	58	629	1,200	1 4 11	6 8 2	11 3	29	307	2,036	

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Khalisai, share of Inail	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhal.		
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Bancu	Government rakh
				Brought forward										
			256	Taraf Sukha ..	604 0 0	300 0 0	250 0 0	250 0 0	239	250	818	..	25	..
			257	Chak Inayatpur ..	..	22 8 0	30 0 0	30 0 0	32	32	39	..	1	..
			258	Chak Rampur ..	64 3 2	61 6 6	53 0 0	53 0 0	166	106	165	..	13	..
			259	Inayatpur ..	..	277 0 0	350 0 0	370 0 0	719	619	864	..	65	..
			260	Usafpur ..	202 13 0	226 0 0	140 0 0	140 0 0	217	186	212	..	14	..
			261	Rampur ..	773 11 6	601 9 6	497 0 0	618 0 0	1,070	1,070	3,059	..	200	514
			262	Jaladabad ..	516 0 0	289 0 0	290 0 0	300 0 0	505	565	982	3	449	..
			263	Mubarakpur ..	139 0 0	200 0 0	200 0 0	200 0 0	543	470	5,167	..	561	2,345
			264	Jagatpur ..	550 0 0	640 0 0	550 0 0	554 0 0	815	845	1,163	18	92	..
			265	Panj grain ..	1,052 0 0	850 0 0	800 0 0	800 0 0	749	800	1,713	..	95	..
			266	Thatta Kureshi	1,863 3 3	1,200 0 0	1,200 0 0	1,240 0 0	611	950	822	1	118	..
			267	Taraf Massu ..	790 11 0	515 1 4	695 0 0	695 0 0	399	596	485	..	44	..
			268	Ganga ..	723 0 0	580 0 0	580 0 0	580 0 0	307	480	266	1	21	..
			269	Chak Muhsan ..	789 0 0	900 0 0	750 0 0	760 0 0	381	659	655	2	62	..
			270	Khan Khangarh ..	5,761 0 0	3,494 8	3,300 0 0	3,105 0 0	1,142	2,640	1,031	14	201	..
			271	Kamalpur ..	2,196 0 0	1,550 0 0	1,450 0 0	1,500 0 0	1,007	1,107	1,478	3	86	..
			272	Sadewahan ..	3,289 0 0	2,409 0 0	1,800 0 0	1,800 0 0	1,353	1,500	2,110	..	118	190
			273	Patni ..	300 0 0	360 0 0	300 0 0	300 0 0	495	450	1,635	..	85	456
				Carried over ..										

MIZAPFARGARH TAHSIL.

THAL CHAHU NAHRI.

KHALISAI

IV. continued.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						Assessment per acre on			Add to column 11 Grazing and Date assessment.			REMARKS.
Uncultivated		Cultivated.			Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing lands jama.	Date jama.	Grand Total	
Culturable waste.	Lately aban- doned.	Irrigated.	Unirrigated.	Total.								
326	23	191	..	191	480	0 7 9 0 8 4 1 14 6	..	17	78	346	The former jama was very light. The people are in middling circumstances. I have doubled the former jama. It was not safe to go higher.	
21	..	17	..	17	38	0 13 2 0 13 6 1 14 1	..	..	13	45	
64	1	87	..	87	142	0 10 11 0 11 11 1 3 6	..	3	37	146		
372	31	386	..	386	789	0 11 7 0 12 7 1 9 8	..	20	600	1,239	Former jama very light. I could not go as high as revenue rates, for the owners could not bear a greater enhancement. The proposed jama is nearly double the former jama.	
6	9	128	..	128	198	0 13 7 0 14 7 1 6 6	..	3	39	222	Has suffered from insufficient canal supply. The owners except the Kirars and Khokhars are badly off. I could not assess up to revenue rates.	
1,656	101	588	..	588	2,345	0 6 9 0 7 4 1 13 1	..	88	400	1,558	The great increase requires justification. Half the village has been bought by wealthy men, and a new canal has been made which will irrigate the village. There is great room for improvement.	
203	55	272	..	272	530	0 8 3 0 15 3 1 13 8	..	24	146	676		
1,910	50	295	..	295	2,261	0 2 8 0 3 4 1 9 6	..	50	34	554		
555	46	432	..	452	1,053	0 11 8 0 12 10 1 13 11	..	30	68	943	This is a very good village, but the jama was collected with great difficulty, and the suilaba lands were assessed much too high. Hence a reduction was necessary, but we need not go so low as revenue rates.	
1,169	42	407	..	407	1,618	0 7 6 0 7 11 1 5 3	..	01	406	1,267		
232	60	238	128	411	703	1 2 6 1 5 7 2 5 0	..	15	51	2,026		
205	19	217	..	217	441	1 3 8 1 5 7 3 11 10	..	11	67	673	A superior village near Khangarh. It has deteriorated and some reduction is necessary. Still the village is much above the average.	
99	1	164	..	164	264	1 10 10 1 13 1 2 14 16	..	5	37	522	Exactly similar to the last, which it adjoins.	
253	23	182	137	309	591	1 0 1 1 1 10 2 2 1	..	14	59	732	A very superior village in every way—soil, water, and markets. The former jama was severely felt and some reduction was essential.	
174	32	610	..	610	816	2 9 0 3 3 9 4 5 3	..	10	160	2,816		
820	27	542	..	542	1,389	0 12 6 0 12 9 2 0 8	..	42	86	1,235		
916	163	723	..	723	1,802	0 12 6 0 13 4 2 1 2	..	54	73	1,927	The village is above the average. A village in distress from over-assessment and deficient canal supply. Still there is no need to go as low as revenue rates.	
794	36	284	..	284	1,034	9 6 1 0 8 7 1 11 3	..	30	14	494	The former jama was very low and little improvement has occurred. I could not assess higher.	

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil. Assessment Circle. Khalisa, sharad or Jagir. Serial No.				Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the Revenue Rates of	Proposed assessment.	Total area.	Minhdi.		
			1st Settlement.		2nd Settlement.	3rd Settlement.	Lakhraj.					Banen.	Government Rakh.	
				Brought forward										
274	Gopang	..		244 7 6	207 9 8	126 0 0	126 0 0	315	315	800	..	51	..	
275	Sheikhpur	..		240 4 3	192 6 4	174 0 0	174 0 0	357	300	910	..	282	..	
276	Kasba 2nd	..		590 0 0	420 0 0	420 0 0	420 0 0	516	516	047	..	49	..	
277	Gere Wahan	..		1,508 0 0	1,250 0 0	1,150 0 0	1,160 0 0	870	1,000	1,563	..	61	..	
278	Chuharpur	..		1,702 4 0	1,630 15 3	1,617 0 0	1,617 0 0	526	1,282	594	..	57	..	
279	Matol	..		6,435 14 0	4,631 0 0	3,925 0 0	3,925 0 0	1,447	3,325	1,215	6	100	..	
280	Rangilpur	..		942 4 6	736 8 0	737 8 0	737 0 0	438	650	436	..	26	..	
281	Wasti Wahan	..		196 4 0	107 0 0	107 0 0	107 0 0	85	90	200	..	14	..	
282	Jhok	..		2,967 0 0	2,500 0 0	2,100 0 0	1,542 0 0	961	1,452	1,187	1	894	..	
283	Gajju Wahan	..		2,664 4 6	2,075 11 6	1,327 0 0	1,914 0 0	1,565	1,700	2,873	..	187	..	
284	Fazilwala	..		4 15 0	4 0 0	4 0 0	4 0 0	10	10	24	..	..	..
285	Lung	..		815 0 0	660 0 0	500 0 0	500 0 0	317	427	640	..	413	..	
286	Saifullabpur	..		214 3 6	224 4 6	173 0 0	173 0 0	118	173	159	..	34	..	
287	Mond	..		1,084 0 0	940 0 0	900 0 0	900 0 0	577	900	997	..	229	..	
288	Khokhar	..		1,665 8 0	1,470 0 0	1,300 0 0	1,300 0 0	553	1,180	803	..	47	..	
				Carried over										

MUZAFFARGARH TAHSIL,
THAL CHAHNI NAHRI.
KHALISA.

IV. continued.

16	17	18	19	20	21	22	23	24	25	26	27	28						
MALGUZARI INCLUDING JAGIR.						Assessment per acre on			Add to column 11 Grazing and Date assessment.			REMARKS.						
Uncultivated.		Cultivated.			Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing lands jama.	Date jama.	Grand Total.							
Culturable waste.	Lately aban- doned.	Irrigated.	Unirrigated.	Total.														
66 426	6 7	177 195	.. ..	177 195	249 628	0 5	10 3	4 7	3 8	1 1	6 7	4 22	319 322	Improvement small. Former jama very light. I could not assess higher.				
540 987	83 45	275 470	.. ..	275 470	898 1,502	0 10	8 3	9 9	2 8	1 2	0 1	31 40	7 1,047	554 1,047	This village has been in difficulties since I have known it. Jama collected with difficulty. People poor and in debt. The reduction I have given will be sufficient.			
233	21	283	..	283	537	2	2	6	2	6	2	4	8	6	13	51	1,349	A village of first rate soil and crops near Khungarh. A reduction was necessary because the village had suffered from deficient canal supply. Still the village is so good, it was not necessary to go so low as revenue rates.
292	43	774	..	774	1,109	2	11	9	3	0	0	4	4	9	17	180	3,522	A very superior village close to Khungarh reduced by canal failure and a high jama. Still it was not necessary to go so low as revenue rates.
153	13	244	..	244	410	1	7	10	1	9	4	2	10	7	8	29	681	Some of the wells are decidedly bad and the jama is collected with difficulty. Reduction was necessary but there was no need to go as low as revenue rates as the village is decidedly above the average.
102 270	29 33	43 435	12 254	55 689	186 992	0 1	7 3	2 7	0 1	7 7	9 6	1 2	10 1	9	6 50	4 96	100 1,578	A rich village which has deteriorated. Jama collected with difficulty. Cultivation and the number of wells decreased; still we need not go so low as revenue rates, for the village is one of the rich Khungarh villages.
1,720	45	909	12	921	2,636	0	9	6	0	10	2	1	13	6	88	122	1,910	Resembles the last except that there is little difficulty in collecting the jama. Reduction must be given to the poorer owners and the bad wells; but it is a sugarcane village and we need not go as low as revenue rates.
16 41	.. 10	8 176	.. ..	8 176	24 227	0 10	6 8	0 1	6 14	6 12	8 1	4 6	10	..	..	..	30 580	One of the rich Khungarh villages, decidedly inferior to its neighbours.
53 447	9 13	63 308	.. ..	63 308	125 768	1 0	1 14	6 6	2 2	11 10	11 9	..	14	..	14	14	187 1,126	A rich Khungarh village. A superior sugarcane Khungarh village. Former jama maintained.
446	15	295	..	295	756	1	7	6	1	9	0	4	0	0	23	89	1,232	One of the best villages in the district, but the owners are much indebted and some reduction is necessary.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil. Assessment Circle. Khalisa, shared or Jagir				Serial No.	Highest assessment of			Average demand of last five years.	Estimated demand at the Revenue Rates of	Proposed assessment.	Total area.	Minhái.		
Village.					1st Settlement.	2nd Settlement.	3rd Settlement.					Iakhiraj.	Banen.	Government Rakh.
Brought forward														
	289			Kotla ..	353 0 3	322 14 9	297 0 0	297 0 0	119	180	259	..	21	..
	290			Chak Chuhanpur	110 11 9	96 2 0	86 0 0	86 0 0	45	66	86	..	6	..
	291			Rakha Núr Khán	4,201 8 0	3,500 0 0	3,140 0 0	3,140 0 0	2,403	2,800	2,534	..	172	..
	292			Amanpur ..	216 14 0	150 0 0	150 0 0	150 0 0	270	200	724	..	22	..
	293			Dittanwalli ..	805 7 6	260 0 0	300 0 0	300 0 0	696	520	79	..	97	..
	294			Baghwala ..	235 0 0	240 0 0	150 0 0	163 0 0	437	374	600	5	21	..
	295			Mondka ..	2,037 0 0	1,872 0 0	1,691 0 0	1,697 0 0	1,966	1,966	1,826	..	306	..
	296			Chak Alam Shah	95 0 0	112 0 0	112 0 0	112 0 0	97	112	62	..	4	..
	297			Tibba Dhattian ..	1,134 11 6	796 11 0	701 0 0	701 0 0	1,421	1,050	1,242	..	110	..
	298			Wahi Mirza Beg	513 15 3	383 5 0	346 0 0	346 0 0	633	533	1,192	..	204	..
	299			Pakka Ghalwan	486 0 0	761 14 9	387 0 0	387 0 0	434	449	379	..	21	..
	300			Wasti Kazi ..	1,182 9 6	1,120 0 0	1,177 0 0	1,177 0 0	1,661	1,661	1,494	..	74	..
	301			Jogi Wali ..	60 0 0	36 0 0	105 0 0	205 0 0	125	85	1,067	..	76	760
	302			Chimruwala ..	476 14 6	387 8 0	292 0 0	292 0 0	528	328	262	1	25	..
	303			Shakar Bela ..	436 6 9	400 0 0	250 0 0	300 0 0	266	266	531	..	40	..
	304			Kabirpur ..	1,187 9 6	1,012 8 0	908 0 0	908 0 0	931	931	1,076	..	49	..
	305			Jalwala Amir Pir	49 9 6	50 3 9	80 0 0	80 0 0	144	144	2,415	..	32	1,017
	306			Chak Ghazanfargar	31 6 3	41 0 0	41 0 0	41 0 0	32	34	39	..	2	..
	307			Muhammadvpur ..	1,367 0 0	1,400 0 0	1,200 0 0	1,200 0 0	1,605	1,605	1,726	..	167	..
	308			Ghazanfargarh ..	1,002 0 0	1,065 0 0	876 0 0	873 0 0	961	961	1,689	..	139	..
	309			Kot Dadau ..	1,913 0 0	2,034 0 0	1,734 0 0	1,734 0 0	1,419	1,784	1,300	1	353	..
	310			Umarpur ..	2,056 0 0	1,610 0 0	1,550 0 0	1,962 0 0	1,793	1,982	2,558	..	334	..
				Carried over ..										

MCZAFARGARH TAHSIL.
THAL CHAHI NAHRI
KHALISA.

IV. continued.

26	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						Assessment per acre on			Add to column 11 Grazing and Date assessment.			REMARKS.
Uncultivated.		Cultivated.			Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing lands jama.	Date jama.	Grand Total.	
Culturable waste.	Lately aban- doned.	Irrigated.	Unirrigated.	Total.								
149	24	65	..	66	238	0 11	1 0 12	1 2 12 4	9	4	193	The village is much reduced by canal failure plus a high assessment. The canals have been improved, but some reduction is necessary. Still it is well above the average.
53	3	24	..	24	80	0 12	3 0 13	2 2 12 0	3	4	73	Very similar to the last to which it was attached before this settlement.
1,010	54	1,285	13	1,298	2,362	1 1	8 1 3	0 2 2 6	53	21	2,374	Like the rest of the Khangarh villages. Reduced by canal failure and high jama, but still much above the average.
616	51	146	..	146	712	0 4	4 0 4	6 1 6 11	26	..	228	Soil Ralar. Owners poor. Canal supply deficient till lately. I could not assess as high as revenue rates.
285	23	386	..	386	694	0 10	6 0 12	0 1 6 7	15	2	537	On the edge of the Thal. In 1878 was injured by a flood. Sales and mortgages many. I could not assess higher.
322	14	238	..	238	674	0 10	0 0 10	5 1 9 2	17	2	393	Suffers from floods. The former jama very light. I have more than doubled the jama and could not go higher.
363	51	1,106	..	1,106	1,620	1 1	3 1 4	5 1 12 5	35	18	2,019	Consists of two good sugarcane wells. Former jama maintained.
6	..	52	..	52	58	1 12	11 1 15	3 2 2 6	..	3	116	The former jama was very light, but the improvement made since last settlement does not justify our going as high as revenue rates.
325	25	782	..	782	1,182	0 13	6 0 14	10 1 5 6	25	..	1,075	Exactly similar to the last which it adjoins.
631	13	344	..	344	988	0 7	1 0 8	8 1 8 9	32	..	665	
100	3	255	..	255	368	1 3	0 1 4	1 1 12 2	5	2	456	
530	4	886	..	886	1,420	1 1	10 1 2	8 1 14 0	27	9	1,697	
161	13	67	..	67	231	0 1	3 0 5	1 1 4 4	9	..	54	The present jama is very light being only Rs. 40. Soil bad, kalarashi and rapar. People very poor. Has suffered from floods. It was impossible to assess higher.
48	13	175	..	175	236	1 4	0 1 6	3 1 14 0	3	8	533	
282	67	142	..	142	491	0 8	0 0 8	8 1 14 0	17	1	294	
893	134	600	..	600	1,027	0 13	10 0 14	6 1 13 10	15	4	950	
1,215	4	87	..	87	1,366	0 1	7 0 1	8 1 0 6	64	6	213	
18	2	17	..	17	37	0 13	11 0 14	8 2 0 0	..	1	35	
621	64	874	..	874	1,649	0 0	10 1 0	6 1 13 5	50	60	1,715	
960	55	534	..	534	1,549	0 9	1 0 9	11 1 12 10	40	55	1,956	
125	34	782	6	788	947	1 5	1 1 14	2 2 4 3	8	94	1,886	A very superior village near Chazangarh. Sugar-cane largely grown. Eleven new wells. Former jama maintained though higher than revenue rates.
637	56	634	892	1,526	2,319	1 12	5 0 14	3 1 4 9	70	334	2,446	Very similar to the foregoing except that it runs more down into the Bet, and gets more sailaba.

IV—continued.

16	17	18	19	20	21	22	23	24	25	26	27	28	
MALGUZARI INCLUDING JAGIR.						Assessment per acre on			Add to column 11 Grazing and Date assessment.			REMARKS.	
Uncultivated.		Cultivated.			Total Malguzari lands.	Total area.	Total Malguzari land.	Total land under cultivation.	Grazing land area.	Date jama.	Grand total.		
Culturable waste.	Lately aban- doned.	Irrigated.	Unirrigated.	Total.									
58	5	94	2	96	153	9 13	0 0	15 11	9 0	3	6	159	Canal supply good, but it gets floods which do a great deal of injury. For this reason only we could not assess up to revenue rates.
1,031	94	1,208	66	1,274	2,399	0 11	2 0	11 81	6 5	56	6	1,812	Part of the village is inferior kalar land and it suffers from floods. People poor and in debt. There has been good improvement but we could not go as high as revenue rates.
1,118	41	354	25	359	1,621	0 3	10 0	4 11	1 6	40	2	434	Very similar to the last which it adjoins.
191	78	863	8	871	1,140	1 2	2 1	3 31	9 2	16	15	1,339	
679	41	917	446	1,363	2,074	9 11	2 0	15 11	6 3	60	120	2,140	
478	66	943	..	933	1,177	0 15	9 1	6 61	10 2	36	15	1,576	
899	122	1,259	18	1,277	2,298	0 7	8 0	11 61	4 8	60	120	1,830	Suffer from floods. Has improved considerably but was in distressed circumstances when settlement began. I could not assess higher.
1,399	353	1,206	2,671	3,577	5,722	9 11	11 0	12 91	2 4	100	12	4,662	
819	102	493	1,188	1,681	2,692	9 9	8 0	10 20	15 8	70	...	1,720	A superior village which has much improved. It suffers from floods. The increase made is as much as the village could bear.
240	21	90	366	456	715	0 10	6 0	10 91	0 10	18	...	498	
1,415	330	2,524	279	2,803	4,548	0 5	2 0	9 60	15 3	100	16	2,818	The area was over estimated at measurements for a quantity of land was irrigated by accidental rainfall which is now cut off by the erection of the Makhana Bela Band.
150	88	619	416	1,035	1,973	0 15	2 1	0 61	4 3	18	...	1,325	
479	45	408	86	493	1,017	0 9	2 0	9 51	3 6	49	...	640	Soil mostly bad kalar and owners very poor. Suffer from floods. Inferior crops grown. I could not assess up to revenue rates.
802	115	745	97	842	1,757	0 7	5 0	7 91	0 2	70	9	929	Exactly similar to the last which was formerly a part of it.
1,329	65	543	85	628	2,022	0 6	10 0	7 11	6 11	50	...	650	
178	213	365	...	365	816	0 12	1 9	12 91	12 7	41	...	696	
386	112	439	...	430	928	0 12	2 9	12 11	11 19	50	...	738	
1,627	339	1,866	...	1,866	3,726	0 10	10 0	11 71	7 2	93	...	2,793	The soil is generally good but the people are very poor. The former jama was very light. I could not go higher.
811	368	515	...	515	1,694	0 7	5 0	7 101	9 9	50	...	839	
279	68	976	2	978	1,519	0 15	4 1	0 61	6 1	30	7	1,387	Has improved considerably but was injured by a flood in 1878. I could not increase more than 50 per cent.
1,034	290	874	...	874	2,198	0 8	3 0	8 91	0 6	66	...	1,266	Similar to the last but could not bear an increase of more than 50 per cent.
874	40	760	22	782	1,696	0 8	10 0	9 41	4 3	50	...	1,041	This village suffers from floods from the Saithal Bhand, mortgages recently on the increase. The village has improved but cannot bear a greater increase.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil				Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the Revenue Rates of.	Proposed assessment.	Total area.	Minhat.		
Assessment Circle.					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhroj.	Banen.	Government Rakh.
Khalisa, shared or Jagir.														
Serial No.														
Brought forward														
333	Kot Shah	...	...	218 0 0	250 0 0	250 0 0	250 0 0	405	360	596	...	265	...
334	Kachi Wali	...	...	860 4 6	950 0 0	850 0 0	850 0 0	1,222	1,222	902	...	128	...
335	Hussanpur	...	...	655 4 6	900 0 0	700 0 0	700 0 0	1,161	975	1,538	...	60	...
336	Dobli	...	...	43 0 9	200 0 0	150 0 0	150 0 0	287	200	509	...	72	...
337	Rakba Sarkari	...	...	234 0 0	550 0 0	300 0 0	394 0 0	906	650	1,027	...	81	...
338	Daira Waddhu	...	...	474 5 6	550 0 0	450 0 0	523 0 0	1,328	850	2,156	1	55	328
339	Phullan Wali	...	...	269 9 3	427 5 0	418 0 0	418 0 0	395	418	247	...	16	...
340	Basti Kharak	...	...	1,464 0 0	1,319 0 0	1,361 0 0	1,361 0 0	1,395	1,681	821	...	60	...
341	Saindar Pir	...	...	198 4 6	150 0 0	150 0 0	150 0 0	118	150	108	...	29	...
342	Tibbi Nunari	...	...	2,279 12 0	2,500 0 0	2,300 0 0	2,300 0 0	1,807	2,108	2,460	...	1,182	...
343	Chobara	...	...	334 5 0	291 0 0	287 0 0	287 0 0	236	287	156	...	12	...
344	Mahrpur	...	...	1,054 1 0	1,040 0 0	1,000 0 0	1,000 0 0	707	1,000	585	...	144	...
345	Chak Sur Wala	...	...	206 14 9	183 0 0	153 0 0	153 0 0	125	153	127	...	39	...
346	Palia Kalra	...	...	990 13 0	1,000 0 0	860 0 0	860 0 0	677	774	683	...	234	...
347	Tal Kachhu	...	...	836 0 0	1,020 0 0	877 0 0	877 0 0	1,020	1,020	957	...	88	...
348	Fatch Wala	...	...	191 8 0	142 9 3	124 0 0	124 0 0	69	80	41	...	2	...
349	Bhagwat	...	...	315 0 0	250 0 0	200 0 0	200 0 0	154	144	95	...	10	...
350	Haji Mailla	...	...	451 9 8	167 8 0	148 0 0	148 0 0	466	300	568	5	37	...
Carried over														

NUZAFFARGARH TAHSIL.
CHAH NABUL.
KHAFIA.

IV—continued.

16	17	18	19	20	21	22	23	24	25	26	27	28	
MALGUZARI INCLUDING JAGIR.						Assessment per acre on			Add to column 11 Grazing and Date assessment.			REMARKS.	
Uncultivated.		Cultivated.			Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing land jama.	Date jama.	Grand total.		
Culturable waste.	Lately aban- doned.	Irrigated.	Unirrigated	Total.									
115	2	216	...	216	333	0 9 8	1 1 4	1 10 8	6	...	368	Present jama very light. Proprietors lazy synds. Cultivation decreased since the Revenue Survey. One new well, if would not bear a greater increase.	
105 784	7 56	662 638	...	662 638	774 1,478	1 5 8 0 10 2	1 9 3 0 10 7	1 13 6 1 8 5	6 42	6	1,334 1,917	Soil kalar and bad and it suffers from floods. Has improved but it could not bear a greater increase.	
277	7	163	...	163	437	0 6 3	0 7 4	1 4 11	14	...	214	Soil of two wells good the rest bad. Owners with one exception poor. Canal supply deficient. Has improved slightly but could not stand a greater increase.	
427	24	495	...	495	946	0 10 1	0 11 0	1 5 0	2	...	672	Has improved much. Former jama very low. It could not bear a greater increase.	
975	77	720	...	720	1,773	0 7 5	0 7 9	1 2 11	62	13	916	On the soil of the Sardarwah, and suffers in consequence. Soil mostly bad rapar. Has improved much, and a large increase has been taken. Former jama very low.	
13 22	7 6	211 744	...	211 744	231 771	1 11 1 2 0 9	1 12 11 2 11 2	1 15 8 2 4 2	...	3 5	421 1,686	A very superior village equal to those about Khangarh.	
4	12	63	...	63	79	1 6 3	1 14 6	2 6 1	...	3	153	Village well above the average; present jama maintained though above revenue rates.	
152	72	1,054	...	1,054	1,278	0 13 9	1 10 5	2 0 0	44	43	2,195	A superior sugar-cane village. Some owners are very poor and some land bad. These must get a reduction for their jama is collected with difficulty, but we need not go as low as revenue rates.	
8 35	15 29	126 377	...	126 377	144 441	1 13 5 1 11 4	1 15 7 2 4 3	2 4 5 2 5 10	...	2	289 1,000	A superior village near Kinghar. A superior village near Kinghar. People industrious and well off. Present jama collected with ease. It is therefore maintained, though above revenue rates.	
19	1	68	...	68	88	1 3 3	1 11 10	2 4 0	...	...	153	Similar to the last and former jama maintained.
59	15	376	...	376	449	1 2 2	1 11 7	2 1 0	4	1	779	Part is of poor sandy soil and some owners poor, some reduction must be given, but we need not go so low as revenue rates.	
322 2	53 ...	543 37	...	544 37	919 39	1 1 1 1 15 3	1 1 9 2 0 10	1 14 0 2 2 7	38 ...	...	1,058 80	Formerly decidedly over assessed though above the average. We need not go so low as revenue rates.
3 210	... 50	82 267	...	82 267	85 527	1 8 3 0 8 5	1 11 1 0 9 1	1 12 1 1 2 0	...	1 13	145 4	317	The village is above the average. Former jama very light. I have more than doubled it, but could get no nearer to revenue rates.

APPENDIX

[illegible]

No. IV—continued.

28	27	26	25	24	23	22	21	20	19	18	17	28											
MALGUZARI INCLUDING JAIGR.												Assessment per acre on			Add to column 11 Grazing and Date assessment.			REMARKS.					
Uncultivated.		Cultivated.			Total Malguzari lands.			Total area.			Total land under cultivation.			Grazing land jaiga.			Date jama.			Grand total.			
Culturable waste.	Lately aban- doned.	Irrigated.	Unirrigated.	Total.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing land jaiga.	Date jama.	Grand total.	Culturable waste.	Lately aban- doned.	Irrigated.	Unirrigated.	Total.	Total area.	Total Malguzari lands.		Total land under cultivation.	Grazing land jaiga.	Date jama.	Grand total.	
17	4	256	...	256	277	1 15	2 2 0 2 5 0	...	6	594	17	4	256	...	256	277	1 15	2 2 0 2 5 0	...	6	594	A superior sugar-cane village. Former jama maintained though above average.	
1	...	54	...	54	55	1 7	2 1 13 1 1 13 8	...	...	100	1	...	54	...	54	55	1 7	2 1 13 1 1 13 8	...	...	100	
17	12	274	...	274	303	1 2	1 1 13 1 2 0 1	...	3	553	17	12	274	...	274	303	1 2	1 1 13 1 2 0 1	...	3	553	Required relief but it was not necessary to go as low as revenue rates.	
...	...	26	...	26	26	2 0	6 2 8 0 2 8 0	...	...	65	...	...	26	...	26	26	2 0	6 2 8 0 2 8 0	...	...	65	Similar to the last.
26	8	302	...	302	336	1 0	3 1 10 8 1 13 8	...	11	571	26	8	302	...	302	336	1 0	3 1 10 8 1 13 8	...	11	571		
4	1	67	...	67	62	1 3	1 1 1 7 1 14 1	...	...	107	4	1	67	...	67	62	1 3	1 1 1 7 1 14 1	...	...	107	
93	4	188	...	188	285	0 15	4 1 3 10 1 14 1	5	...	358	93	4	188	...	188	285	0 15	4 1 3 10 1 14 1	5	...	358		
18	...	86	...	86	104	1 1	1 1 1 8 9 1 13 11	...	...	161	18	...	86	...	86	104	1 1	1 1 1 8 9 1 13 11	...	...	161	
255	29	696	...	696	980	9 8	4 1 4 1 1 12 7	30	...	1,273	255	29	696	...	696	980	9 8	4 1 4 1 1 12 7	30	...	1,273		
13	7	40	...	40	60	13	1 1 2 2 1 11 2	...	...	68	13	7	40	...	40	60	13	1 1 2 2 1 11 2	...	...	68	
27	19	94	...	94	140	12 8	1 1 2 1 13 11	2	2	180	27	19	94	...	94	140	12 8	1 1 2 1 13 11	2	2	180	A very poor village. Soil bad, Jama collected with difficulty. No increase possible. Much above the average.	
15	5	48	...	48	68	0 15	2 1 0 8 1 7 8	...	...	71	15	5	48	...	48	68	0 15	2 1 0 8 1 7 8	...	...	71	
...	...	25	...	25	26	2 3	7 2 6 5 2 6 5	...	...	60	...	...	25	...	25	26	2 3	7 2 6 5 2 6 5	...	...	60	
29	6	53	...	53	88	1 1	4 1 2 7 1 14 10	2	...	101	29	6	53	...	53	88	1 1	4 1 2 7 1 14 10	2	...	101		
30	22	323	...	323	375	9 8	6 1 10 1 1 11 3	15	4	636	30	22	323	...	323	375	9 8	6 1 10 1 1 11 3	15	4	636		
287	17	393	...	393	627	0 5	7 0 14 16 1 9 6	50	11	668	287	17	393	...	393	627	0 5	7 0 14 16 1 9 6	50	11	668	A very inferior village. Soil bad kalar. People poor and in debt. Sales and mortgages many. Still the village has improved and can bear an increase but not up to revenue rates.	
15	5	114	59	173	193	1 0	9 1 2 8 1 4 10	...	2	228	15	5	114	59	173	193	1 0	9 1 2 8 1 4 10	...	2	228		
130	19	327	...	327	476	0 12	2 1 7 6 2 2 3	16	7	725	130	19	327	...	327	476	0 12	2 1 7 6 2 2 3	16	7	725	A village above the average. Present jama maintained though above revenue rates. It is collected with ease.	
130	70	488	...	488	688	0 9	10 1 6 1 1 15 2	15	4	969	130	70	488	...	488	688	0 9	10 1 6 1 1 15 2	15	4	969	Above the average. Present jama collected with ease. Therefore it is maintained though above the revenue rates.	
5	2	71	...	71	78	0 14	0 2 4 1 12 8 7	...	...	136	5	2	71	...	71	78	0 14	0 2 4 1 12 8 7	...	...	136	Ditto ditto.
47	1	68	...	68	116	1 6	2 1 11 7 2 15 1	...	...	200	47	1	68	...	68	116	1 6	2 1 11 7 2 15 1	...	...	200	Ditto ditto.
16	3	189	...	189	208	0 15	9 1 10 1 11 13 8	...	...	350	16	3	189	...	189	208	0 15	9 1 10 1 11 13 8	...	...	350	
311	69	778	...	778	1,158	0 12	4 1 4 9 1 14 10	38	11	1,549	311	69	778	...	778	1,158	0 12	4 1 4 9 1 14 10	38	11	1,549	Near the town of Kanghar. Some land very good near the town, but that at a distance is poor. People badly off and jama collected with difficulty. Reduction must be given, but we need not go as low as revenue rates, because the village is above the average.	
387	71	809	...	303	737	0 9	5 0 13 2 1 13 0	21	3	584	387	71	809	...	303	737	0 9	5 0 13 2 1 13 0	21	3	584		
306	46	455	...	455	846	0 15	5 1 1 0 1 13 1	36	45	979	306	46	455	...	455	846	0 15	5 1 1 0 1 13 1	36	45	979		
264	28	284	...	284	574	0 7	7 0 14 0 1 12 1	15	20	543	264	28	284	...	284	574	0 7	7 0 14 0 1 12 1	15	20	543		
324	34	722	...	722	1,080	1 3	5 1 9 5 2 6 0	30	108	1,853	324	34	722	...	722	1,080	1 3	5 1 9 5 2 6 0	30	108	1,853	A superior village with a considerable town. Well situated as regards markets. Some people very poor and some land very bad. It was necessary to give relief to these but not go as low as revenue rates.	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil. Assessment Circle. Khalisa, shared or Jagir. Serial No.				Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the Revenue Rates of.	Proposed assessment.	Total area.	Lakhiraj.	Minikidi.	
			1st Settlement.		2nd Settlement.	3rd Settlement.	Government Rakh.							
				Brought forward										
37				Chabakpur ...	...	1,769 0 0	1,700 14 0	1,701 0 0	1,202	1,550	1,967	...	648	...
37				Valwat ...	786 5 6	842 13 0	745 0 0	745 0 0	1,070	902	1,336	...	782	...
380				Pesa Bhaba ...	630 0 0	550 0 0	442 0 0	464 0 0	363	363	660	...	42	...
381				Usman Kuria ...	3,166 15 6	3,141 0 0	2,750 0 0	2,404 0 0	3,064	2,404	2,582	...	136	...
				"										
382				Chak Shori ...	..	44 10 0	45 0 0	45 0 0	47	47	29	...	3	...
384				Chak Isa Bhaba ...	2 2 6	7 6 0	13 0 0	13 0 0	9	13	23	...	1	...
384				Ismail Shah ...	81 9 0	76 0 0	61 0 0	61 0 0	28	40	113	...	57	...
385				Nur Muhammad Bhaba	61 7 0	73 4 0	60 0 0	60 0 0	120	90	239	...	6	...
386				Ghazil Shah ...	197 5 9	220 0 0	180 0 0	180 0 0	163	180	216	...	46	...
387				Kabul Chhajra ...	50 4 4	68 0 0	65 0 0	65 0 0	78	66	142	...	3	...
388				Abriand ...	302 6 9	217 1 9	254 0 0	254 0 0	295	295	401	...	22	...
389				Khokhar ...	969 11 9	1,100 0 0	1,050 0 0	1,050 0 0	944	1,050	759	...	46	...
390				Dewala ...	505 14 0	505 14 0	544 0 0	600 0 0	894	720	1,300	...	60	...
391				Tal Jalwala ...	146 4 0	830 0 0	240 0 0	240 0 0	243	243	232	...	11	...
392				Chak Kulu Wali ...	19 3 0	18 12 0	17 0 0	17 0 0	37	37	39	...	3	...
393				Kulu Wali ...	218 1 9	211 4 0	183 0 0	183 0 0	196	196	132	...	9	...
394				Manka Bhutta ...	1,551 0 0	2,000 0 0	1,850 0 0	1,853 0 0	2,776	2,476	3,168	...	244	...
395				Kabirwala ...	...	22 0 0	21 0 0	21 0 0	23	23	23	...	1	...
396				Bet Rai Ali ...	1,489 0 0	1,814 0 0	1,769 0 0	1,769 0 0	2,369	1,944	2,653	...	191	...
397				Kulan Shah ...	1,072 0 0	793 0 0	611 0 0	619 0 9	909	909	1,834	...	581	...
398				Miranpur ...	1,426 12 0	1,672 10 9	1,641 6 0	1,734 0 0	2,661	2,300	3,024	...	180	...
399				Mahra ...	3,406 0 0	4,068 0 0	3,290 0 0	3,290 0 0	4,382	3,700	6,160	25	261	...
				Carried over ...										

MUZAFFARGARH TAHSIL.
CHAHAT NAHRI.
KHALISA.

No. IV—continued.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						Assessment per acre on.			Add to column 11 Grazing and Date assessment.			REMARKS.
Uncultivated.		Cultivated.			Total malguzari lands.	Total area.	Total malguzari lands.	Total land under cultivation.	Grazing land jama.	Date jama.	Grand total.	
Culturable waste.	Lately abandoned.	Irrigated.	Unirrigated.	Total.								
500	77	692	...	692	1,319	0 12 7	1 2 10	2 3 10	62	14	1,626	Exactly similar to the last of which it was formerly a part. Former jama light but people poor and jama collected with difficulty. I could not assess higher.
339	61	598	...	503	1,033	0 7 10	0 13 8	1 8 4	46	10	958	
339	15	188	76	264	612	6 8 10	0 9 5	1 6 0	18	76	457	A village which has deteriorated. Land exhausted and jama collected with difficulty. Sales and mortgages frequent. The jama had to be reduced to Rs. 2,404 in 1875-76 and cannot now be raised.
765	197	1,784	...	1,784	2,746	0 13 4	0 14 0	1 5 7	48	85	2,557	
...	1	25	...	25	26	1 9 11	1 2 11	1 14 1	...	11	558	In good circumstances, no reason for reducing the present jama.
16	...	7	...	7	22	0 9 10	0 9 5	1 13 8	...	2	15	
40	1	15	...	16	56	0 5 8	0 11 5	2 10 8	2	9	51	Village deteriorated in cultivated area. One new well. Land poor. The reduction given is sufficient.
161	3	64	...	64	228	0 6 20	0 6 4	1 6 6	5	5	100	An average village. Former jama so light that we cannot raise it to revenue rates.
56	26	87	...	87	169	0 14 5	1 1 0	2 1 1	4	6	190	A superior sugar-cane village which has made much improvement. Present jama collected with ease. I have maintained it though above revenue rates.
68	27	46	...	46	139	0 7 10	0 7 6	1 6 7	3	4	72	
157	28	194	...	194	379	0 11 9	0 12 5	1 8 4	9	2	396	
116	68	630	...	639	715	1 6 2	1 7 7	15 2	18	35	1,105	
726	30	434	...	484	1,240	0 8 10	0 9 3	1 7 10	38	12	770	Cultivation and the number of wells increased slightly and a small increase possible, but the land is poor and people in debt and present jama collected with difficulty. Hence we cannot go up to revenue rates.
80	9	132	...	132	221	1 0 9	1 11 7	1 3 9	4	1	248	A superior village which has improved but some people are poor and former jama is light. I cannot go higher.
12	2	22	...	22	36	0 15 2	1 0 5	1 10 11	...	...	37	
16	1	106	...	106	123	1 7 9	1 9 6	1 13 7	...	...	196	
1,145	145	1,534	...	1,534	2,829	0 12 6	0 14 0	1 9 11	65	7	2,545	
6	4	12	...	12	22	1 0 0	1 0 9	1 14 8	...	...	23	This village has improved but the people are poor. Some of the land is very bad. Though present jama is very light, it is collected with difficulty. The village cannot bear a greater increase.
1,435	163	1,414	...	1,414	3,462	0 8 9	0 9 0	1 6 0	102	60	2,106	
674	7	506	...	506	1,253	0 7 11	0 11 7	1 12 9	37	119	1,065	This village has improved. Some of the people are very poor. Former jama though light is collected at times with difficulty. The increase taken is sufficient.
1,034	365	1,495	...	1,495	2,894	0 12 2	0 12 9	1 8 7	70	95	2,460	
2,469	1,041	2,383	1	2,384	5,864	0 9 7	0 10 1	1 8 10	174	37	3,911	A superior village which was in low circumstances at the beginning of settlement, but which has now improved. Some proprietors are very poor and the village suffers from flood.

APPENDIX

1				2	3	4	5	6	7	8	9	10	11	12	13	14	15			
Name of Tahsil				Assessment Circle				Highest assessment of										Minkat.		
Khalisa, shikar or Jagir.				Serial No.				Village.										Lakhiraj.		
								1st Settlement.										Banan.		
								2nd Settlement.										Government		
								3rd Settlement.										Rakht.		
								Average demand of last five years.												
								Estimated demand at the Revenue Rates of.												
								Proposed assessment.												
								Total area.												

18. continued.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						Assessment per acre on			Add to column 11 Gracing and Date assessment.			REMARKS.
Uncultivated.		Cultivated.			Total malguzari land	Total area	Total malguzari land	Total land under cultivation	Grazing land jama	Past jama	Grand Total	
Culturable waste	Lately aban- doned	Irrigated	Unirrigated	Total								
493	296	704	...	704	1,436	0 8 7 0 9 1 1 3 4		39	4	893	Former jama very light. The people are very poor, and had land preponderates. It was not possible to go as high as revenue rates.	
142	126	345	...	345	613	0 10 2 0 10 8 1 3 0		12	...	423	A poor village which has improved but little. Former jama very light.	
1,334	409	356	...	956	2,699	0 6 11 0 7 1 1 4 1		60	...	1,260	This is a superior village which has much improved. The only reason for not assessing up to revenue rates is the poverty of the people and the lightness of former jama.	
1,336	235	934	...	934	2,505	0 8 1 0 8 6 1 6 8		60	...	1,386	Very similar to the last. Sales numerous.	
515	41	165	...	165	721	0 6 4 0 6 7 1 12 10		28	2	327	This with the last was part of MALWA and is very similar to it.	
953	138	621	...	621	1,712	0 10 5 0 10 5 1 12 9		55	7	1,179		
1,018	67	516	133	689	1,784	0 6 2 0 6 6 1 0 6		40	3	769	This village has improved much, but it is mainly dependent in sailaba and its canal supply is uncertain because the lands are high.	
911	69	388	18	406	1,386	0 4 11 0 5 2 1 1 9		35	4	489	A medium village which has improved much. The owners are very poor.	
1,165	62	1,061	45	1,166	2,321	0 10 5 0 10 10 1 6 9		90	9	1,654	A village which has improved much. Some proprietors very poor and the former jama very light. It could not stand a greater increase.	
7	4	89	...	89	100	0 15 10 1 1 7 1 3 9		...	3	112	A good village with no room for further improvement. It was impossible to assess higher.	
965	134	732	12	741	1,843	0 6 2 0 6 6 1 0 0		65	2	801	The proposed jama is more than double the former. No greater increase was possible.	
585	...	...	...	...	585	...	...	29	...	29	
821	305	594	...	694	1,720	0 5 11 0 6 3 1 2 3		59	3	738	The proposed jama is more than double the former.	
1,365	159	966	...	966	2,490	0 7 0 0 7 10 1 4 2		50	...	1,270	In this village also I have taken as great an increase as was safe. The people are poor.	
717	26	269	30	299	1,042	0 6 10 0 7 0 1 8 6		37	3	497		
66	9	50	27	77	112	0 7 2 0 8 1 0 15 0		5	...	75	This village should have been placed in the bet circle. The area recorded as canal is really sailaba from the Dinga branch.	
42	14	74	7	81	137	0 13 5 0 14 7 1 8 8		...	...	155	
229	40	31	115	146	415	0 4 6 0 4 6 0 12 10		13	...	130		
86,568	12,605	83,862	9,508	92,870	1,91,823	0 11 1 0 12 9 1 10 5		5,263	9,113	1,67,253		
1,78,677	18,240	1,26,709	43,477	1,70,166	3,67,103	0 8 1 0 12 0 1 7 8		9,486	11,103	2,71,891		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil.				Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the Revenue Rates of.	Proposed assessment.	Total area.	Minhái.			MALGUZARI.	
Assessment Circle					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhira.	Banan.	Government Bakh.	Uncultivated	
Khalisa, shared or Jagir Serial No.															Culturable waste.	Lately abandoned.
ALIPUR TANSIL.				1	Tror Shahpur ...	..	194 0 0	266 0 0	867 0 0	876	924	2,838	...	444	1,477	105
BET CHESAB				2	Muradpur ..	1,362 0 0	1,080 0 0	810 0 0	1,662 0 0	1,311	1,438	2,264	...	131	940	216
KHALISA.				3	Rapri ..	298 0 0	336 0 0	243 0 0	394 0 0	345	322	698	...	301	104	2
				4	Manikwall ..	79 0 0	79 0 0	98 0 0	188 0 0	194	194	806	...	286	336	1
				5	Bana Roya ..	776 13 0	700 0 0	600 0 0	705 9 7	712	648	1,668	...	215	699	66
				6	Miranpur ..	298 1 0	342 0 0	126 0 0	584 9 7	668	636	2,104	...	314	1,215	15
				7	Pakka Shah Syad Ali ..	52 0 0	75 0 0	80 0 0	80 0 0	65	70	393	...	36	279	42
				8	Kharwala ..	153 5 0	257 0 0	300 0 0	300 0 0	342	300	537	...	102	139	42
				9	Bilru Sandila ..	1,246 7 6	1,450 0 0	1,450 0 0	1,459 0 0	1,798	1,798	3,043	...	181	1,126	212
				10	Faizpur ..	1,402 14 0	766 0 0	500 0 0	407 0 0	684	677	1,618	...	598	260	16
				11	Binda Ishâq ..	957 0 0	769 0 0	769 0 0	769 0 0	1,059	940	3,058	...	112	1,849	173
				12	Chak Dadda ..	19 0 0	28 0 0	190 0 0	210 0 0	152	161	915	...	146	660	26
				13	Bet Panuban ..	1,072 0 0	946 0 0	...	953 0 0	669	700	3,098	...	1,064	1,399	6
				14	Khorora Fazil Muhammad ..	1,105 0 0	615 0 0	756 0 0	756 0 0	709	710	1,219	...	71	494	54
				15	Chagrewali ..	262 0 0	444 0 0	726 0 0	726 0 0	728	726	2,539	...	265	1,647	71
				16	Madwala ..	221 0 0	187 0 0	249 0 0	249 0 0	470	470	3,331	...	114	1,979	58
				17	Damor Wala Janubi ..	980 0 0	1,022 0 0	730 0 0	2,025 8 0	2,064	2,282	10,179	...	1,126	2,210	4,561
BET CHESAB				18	Makhan Bela ..	421 6 3	436 15 0	607 15 0	1,003 0 0	1,143	1,109	3,911	...	13,69	1,439	188
KHALISA.				19	Shakar Bela ..	259 12 0	600 0 0	350 0 0	294 0 0	291	291	738	...	24	420	20
				20	Musallam Chhajra ..	146 5 0	241 0 0	275 0 0	369 0 0	561	319	628	...	63	254	26
				21	Bet Nurwala ..	...	184 0 0	30 0 0	199 0 0	223	223	1,809	...	399	998	202
				22	Kundrala ..	1,414 0 0	900 0 0	701 0 0	1,172 0 0	1,241	1,166	6,596	...	1,710	2,673	95
				23	Kachi Lal ..	...	...	20 0 0	271 0 0	253	253	2,113	...	10	1,797	66
				24	Serki ..	4,438 0 0	2,385 0 0	2,409 0 0	1,277 0 0	1,451	1,490	4,911	...	1,055	2,077	104
				25	Tibba Burra ..	...	1,023 0 0	828 0 0	480 0 0	555	573	1,154	...	331	262	28
				26	Marian ..	396 0 0	800 0 0	801 0 0	785 0 0	638	638	1,645	...	85	906	265
				27	Khanpur Narakko ..	2,126 0 0	1,223 0 0	1,280 0 0	1,296 0 0	1,173	1,246	2,474	...	622	917	43
				28	Bet Isa ..	310 0 0	240 0 0	175 0 0	227 0 0	150	180	1,318	...	133	955	20
				29	Bet Mullanwalli ..	435 0 0	300 0 0	876 0 0	742 0 0	847	817	6,115	...	824	4,166	492
				30	Bet Shikra ..	...	...	...	25 0 0	60	60	420	...	1	363	...
				31	Parara ..	1,963 0 0	988 0 0	700 0 0	677 0 0	466	502	4,205	...	2,019	1,104	82
				32	Kach Pak ..	528 0 0	255 0 0	141 0 0	220 0 0	215	227	1,000	...	165	626	24
				33	Bet Burra ..	291 0 0	262 0 0	261 0 0	188 0 0	294	294	1,884	...	449	1,173	11
				34	Bet Chana ..	1,048 0 0	860 0 0	800 0 0	192 0 0	208	229	1,440	...	310	861	48
				35	Tror Jhandewali ..	173 0 0	173 0 0	130 0 0	130 0 0	162	162	186	...	5	13	18
				36	Kikrigarh Doma ..	4,136 0 0	2,800 0 0	1,871 0 0	514 0 0	627	654	2,048	...	145	1,815	142
				37	Azamtpur ..	790 0 0	907 0 0	687 0 0	1,347 0 0	1,247	1,241	6,430	...	625	4,549	409
Total				...	29,099 15 9	24,657 15 0	20,908 15 0	23,666 11 2	24,571	24,581	90,188	...	15,748	4,270	3,717	

IV—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR.			Assessment per acre on				Add to column 11 Grazing and date assessment.			REMARKS.
Cultivated.			Total Malguzari land	Total area	Total Malguzari land	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
Irrigated	Unirrigated	Total								
31	781	812	2,394 0	5 3 0	6 2 1	2 2	79	..	1,003 0 0	Land very good. People well-to-do. Jama collected with ease.
551	419	970	2,132 0	10 2 0	10 10 1	7 9	58	32 0 0	1,528 0 0	Adjoins foregoing which it resembles in every way a superior village.
74	212	286	392 0	7 5 0	13 1 1	2 0	5	1 0 0	328 0 0	Two wells fallen in since measurements.
..	183	183	520 0	3 10 0	6 0 1	1 0	17	..	211 0 0	Has an inland part containing four wells of inferior soil. The sailaba part is exhausted by floods, hence I assessed below rates.
81	507	588	1,356 0	6 7 0	7 2 1	1 6	28	2 0 0	688 0 0	
81	469	569	1,790 0	4 10 0	5 8 1	2 2	62	9 0 0	707 0 0	Village much exposed to floods, and intersected by Dhanis. One well in work at measurements. Now useless.
29	7	36	357 0	2 10 0	3 2 1	15 1	16	3 8 0	89 8 0	
103	151	254	435 0	8 11 0	11 0 1	2 11	9	..	309 0 0	
370	1,214	1,624	2,862 0	9 5 0	10 1 0	2 11	67	..	1,865 0 0	
8	627	635	820 0	7 2 0	11 9 1	1 1	14	..	1,691 0 0	
122	83	355	2,977 0	4 10 0	6 1 0	15 9	101	6 0 0	1,047 0 0	
..	143	143	769 0	2 10 0	3 4 1	2 6	31	..	192 0 0	
..	630	630	2,034 0	3 7 0	5 6 1	2 0	70	..	779 0 0	
130	470	600	1,148 0	9 4 0	9 11 1	2 11	27	..	737 0 0	
225	353	538	2,276 0	4 7 0	5 1 1	4 10	86	1 0 0	815 0 0	
229	61	290	2,324 0	2 3 0	3 3 1	9 11	158	..	623 0 0	A Rot village of very superior soil. Proprietors in fair circumstances. Hence I fixed the sailaba rate Rs. 1-2-0 instead of Rs. 1-1-0 which makes the increase.
255	1,645	1,900	6,843 0	4 0 0	6 3 1	3 2	300	..	2,582 0 0	
108	857	965	2,542 0	4 6 0	6 11 1	2 4	79	..	1,188 0 0	Area of wells very small.
..	274	274	714 0	6 4 0	6 6 1	0 11	22	..	313 0 0	
171	114	285	563 0	8 2 0	9 4 1	1 11	14	..	323 0 0	
..	210	210	1,410 0	1 11 0	2 6 1	1 0	60	..	283 0 0	
52	1,066	1,118	3,886 0	3 4 0	4 10 1	1 6	125	37 0 0	1,328 0 0	On the bank of the Chenab. Its condition and area vary extremely. Great room for extension of cultivation. The jama is fluctuating. I thought that rates slightly lower than revenue rates, would encourage the spread of cultivation.
..	238	238	2,103 0	1 11 0	1 11 1	1 0	93	..	346 0 0	Soil good. The increase in the proposed jama above revenue rate is due to the adoption of a Jhalair sailaba rates as suggested by Settlement Commissioner.
543	560	1,103	3,284 0	4 10 0	7 3 1	5 1	109	8 0 0	1,607 0 0	
212	301	513	803 0	8 10 1	11 5 1	1 11	15	5 0 0	593 0 0	
191	198	389	1,560 0	6 2 0	8 7 1	10 3	59	8 0 0	705 0 0	
631	261	892	1,852 0	8 1 0	10 9 1	6 4	48	61 0 0	1,355 0 0	
2	168	170	1,185 0	2 2 0	2 5 1	0 11	51	..	231 0 0	
265	568	633	5,291 0	2 3 0	2 6 1	4 8	159	2 0 0	969 0 0	
..	56	56	419 0	2 3 0	2 4 1	1 2	30	..	90 0 0	
288	117	405	1,591 0	1 11 0	5 1 1	3 10	59	..	561 0 0	
61	121	185	835 0	3 8 0	4 4 1	3 8	33	1 0 0	261 0 0	People impoverished from losses by diluvion. Jama has fallen in consequence from Rs. 1,048 to Rs. 274. On the remainder of the village no slit has been deposited for a long time. Jama collected with difficulty.
85	216	251	1,435 0	2 6 0	3 3 1	2 11	59	7 0 0	369 0 0	
73	148	221	1,130 0	2 7 0	3 3 1	0 7	23	16 0 0	268 0 0	
..	152	152	181 0	13 11 0	14 4 1	1 1	..	..	162 0 0
143	303	446	1,993 0	4 4 0	4 10 1	3 11	100	30 0 0	684 0 0	Impoverished by losses from diluvion. People poor.
330	626	956	5,905 0	3 1 0	3 4 1	4 9	290	..	1,441 0 0	
5,244	15,042	20,386	70,120 0	4 4 0	5 7 1	3 4	2,462	229 8 0	27,272 8 0	

[illegible]

IV—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR			Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS.	
Cultivated			Total Malguzari land	Total area	Total Malguzari land	Total land under cultivation	Grazing land Jama	Date Jama		Grand Total
Irrigated	Unirrigated	Total								
66	38	89	1,410	0 1 2	0 1 4	1 2 11	66	...	183	A very superior Bet village. Proprietors rich. Rate of former assessment Rs. 1-1-9 per acre. For these reasons I did not go as low as revenue rates.
...	173	173	2,378	0 0 3	0 1 1	1 1 0	116	...	294	The land recorded as canal irrigated was no better than Sallaba. Proprietors poor and village exposed to floods. The area of wells and Jhals below the average. For these reasons I did not assess up to adopted revenue rates. The rates gave an increase of more than 100 per cent.
7	87	94	2,124	0 0 6	0 8 1	0 0 0	102	...	196	
89	112	201	1,049	0 2 5	0 3 3	1 1 2	12	...	228	
65	46	111	614	0 2 3	0 3 4	1 3 2	15	...	148	Canal area little better than Sallaba, soil poor and exposed to floods.
85	106	191	1,064	0 2 9	0 3 3	1 3 0	22	...	249	
...	60	60	2,262	0 0 3	0 6 1	1 1 1	110	...	174	A good Bet village. Proprietors well off, similar to No. 39 and No. 48 which are neighbouring villages. The same rates adopted for all.
13	45	58	800	8 11 0	9 0 0	12 5	...	...	45	People poor. Little room for extension of cultivation. Hence did not assess up to revenue rates.
859	650	1,609	8,750	0 2 2	0 3 5	1 2 7	300	4	2,172	The reason for the proposed assessment differing from the revenue rates are (1) that the area recorded as canal irrigated is little better than Sallaba. There is no proper canal irrigation in this village though canals pass through it when the Indus is at its highest the canals burst their banks and flood the country. This water is not controllable and should not be treated as canal. It is pure sallab. (2) at the rates adopted the old jama is nearly doubled which was as much as the village could bear.
168	277	445	4,201	0 1 2	0 2 0	1 3 2	188	...	723	Soil good. Owners well off.
...	93	93	2,225	0 0 7	0 9 1	1 0 0	107	...	206	See remarks to Bet Daryal, No. 44.
786	...	795	3,049	0 4 4	0 6 1	1 0 0	108	6	969	Village exposed to floods. In the hot weather of 1878 great damage was done. Sales numerous. Proprietors in reduced circumstances owing to criminal cases. Average area of wells low. Former jama light. Village could not bear an increase up to revenue rates.
...	411	411	7,104	0 0 3	0 1 1	1 0 0	335	...	746	A Bet village of good soil owned by a single proprietor in good circumstances.
20	172	192	2,884	0 0 1	0 1 1	1 1 10	185	...	827	An inferior Bet village. Lands exhausted and bad; people very poor.
...	29	29	935	0 0 3	0 6 0	14 11	45	...	72	
19	199	218	1,395	0 2 0	0 3 0	14 6	69	...	266	
680	313	893	1,661	0 5 1	0 9 1	1 2 7	80	10	1,136	Near the city of Jatol, soil good area of wells large. Former jama high. Hence I did not go as low as the revenue rates.

APPENDIX

[illegible]

IV. continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR.				Assessment per acre on			Add to column 11 Grazing, and date assessment			REMARKS.
Cultivated			Total Malguzari land	Total area,	Total Malguzari land	Total land under cultivation.	Grazing land jama.	Date Jama	Grand Total.	
Irrigated	Unirrigated	Total								
1,050	508	1,558	4,845 0	7 8 0	8 4 1	1 10 0	185	38	2,727	The village required a reduction in consequence of continued losses by floods and the breaking of bunds. I did not go so low as revenue rates because the village had been paying much higher and because the bund has been now rebuilt and a new canal dug through the village, and because the village is near the town of Jatol.
97	354	451	970 0	6 10 0	8 2 1	1 7	30	1	527	A superior sailaba village. Former jama 80 high for the circumstances of the village, but it was not necessary to go as low as revenue rates jama.
86	493	579	2,699 0	2 6 0	2 9 0	14 5	82	...	549	Soil inferior. People poor and criminal, liable to destructive floods. I could not assess up to revenue rates.
83	354	387	885 0	6 0 0	6 5 0	14 9	15	...	371	A sailaba village of poor high land. Only gets irrigated when the Indus is in highest flood. People very poor. I could not assess up to revenue rates.
213	1,978	2,189	4,655 0	7 4 0	7 7 1	0 2	185	...	2,396	This village has been extremely lucky in getting rich alluvial deposits and its soil is very good. People fairly well off. For these reasons I went higher than revenue rates.
56	875	981	3,009 0	3 8 0	3 9 0	12 2	75	...	785	A peculiar village. When the Indus is in highest flood it is well cultivated. When the Indus is low as in 1875, no land is cultivated. The increase on the old jama is very great. The village is eminently suited for a fluctuating jama. This rabi the new jama has been collected with ease. I did not assess up to revenue rates because the increase in the jama would have been so great.
39	783	822	1,197 0	11 7 0	12 0 1	1 6	38	5	940	Similar but better than No. 59 which it adjoins. Former jama very low. Proprietors mostly well off, soil and crops very good.
52	209	361	709 0	4 2 0	8 10 1	1 5	34	...	426	Very superior soil. Proprietors mostly well off.
..	965	965	2,622 0	4 6 4	5 7 0	15 1	100	...	1,011	
..	14	14	1,827	...	0 0 10	14 10	113	...	126	
..	87	87	538 0	0 9 0	2 10 13	1	17	...	88	Much exposed to floods from the Indus. Soil inferior. Hence I assessed below rates.
7	166	173	434 0	5 8 0	6 0 0	15 0	13	...	175	
...	304	304	2,060 0	2 1 0	2 3 0	15 0	66	...	851	
26	1,406	1,442	6,437 0	2 9 0	2 9 0	12 4	223	...	1,340	Soil poor. Eastern part of the village high and sometimes gets little water. Great room for extension of cultivation. A canal being dug. Fixed the rates for the fluctuating assessment low on purpose to increase cultivation.

APPENDIX

[illegible]

IV—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 grazing and date assessment			REMARKS
Cultivated				Total area	Total Malguasari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
Irrigated	Unirrigated	Total	Total Malguasari land							
..	413	413	4,011	0 0 100	1 70 18	0	180	...	567 0 0	Land bad and high. Only gets sailab when the Indus is at its highest. Proprietors very poor.
270	868	1,138	4,918	0 3 80	3 101 0	10	189	6 0 0	1,394 0 0	
14	819	833	7,576	0 1 00	1 80 15	4	253	...	1,062 0 0	
87	373	460	3,773	0 1 60	1 111 0	1	166	...	628 0 0	
91	906	997	3,917	0 2 70	4 11 0	1	200	...	1,201 0 0	At the junction of the Indus with the Cheual. Soil better than the average. Crops very good. Soil inferior and majority of the people poor.
815	365	670	5,939	0 1 20	2 31 3	9	300	46 0 0	1,172 0 0	
78	219	297	1,465	0 1 80	2 110 14	7	58	...	830 0 0	
88	91	129	1,760	0 0 110	1 31 1	2	160	...	299 0 0	
..	630	630	4,239	0 2 20	2 30 15	0	200	...	791 0 0	The village required relief. I did not go as low as revenue rates only because the village had been paying higher.
..	998	998	2,903	0 4 10	6 20 15	0	150	...	1,086 0 0	
84	391	475	4,282	0 1 10	1 101 0	5	160	2 0 0	649 0 0	
5,512	17,358	22,010	1,20,862	0 2 1	0 3 2	1 0 9	4,068	127 0 0	29,095 0 0	
486	456	952	3,791	0 3 110	5 101 1	1 11	128	110 0 0	1,367 0 0	Soil above the average and protected from floods in its richest part. Proprietors fairly well off.
875	479	1,354	2,463	0 7 10	10 71 3	4	100	6 0 0	1,739 0 0	
219	324	548	2,292	0 3 100	4 11 1	1 1	79	35 2 0	693 2 0	
565	583	1,148	5,953	0 3 50	4 21 5	7	216	43 0 0	1,807 0 0	
505	812	817	4,137	0 3 80	3 91 3	3 3	149	12 0 0	1,145 0 0	Better than its neighbours and had paid much higher than the revenue rates jama. For this reason I did not go as low as revenue rates.
312	822	1,164	6,813	0 2 80	2 101 0	8 8	200	1 0 0	1,413 0 0	
232	902	1,134	3,566	0 4 80	4 110 15	5 5	110	1 0 0	1,203 0 0	
920	390	1,310	2,503	0 8 40	10 41 2	1 1	45	3 0 0	1,520 0 0	
494	274	868	3,651	0 3 40	5 11 5	3 3	175	415 0 0	1,753 0 0	Soil enriched by fertile deposit from the Chenab and had been paying a higher jama than revenue rates. Soil bad. Land high and only gets sailab when the river rises very high. Area of wells below the average. Hence I fixed the rate of sailaba and of abiana below revenue rates.
692	472	1,164	3,529	0 7 00	8 41 9	3 3	160	830 0 0	2,225 0 0	
161	487	618	1,456	0 6 00	7 61 1	8 8	38	6 0 0	729 0 0	
94	304	338	1,821	0 3 100	4 21 2	11 11	64	65 0 0	550 0 0	
90	138	228	1,942	0 1 50	2 21 2	5 5	40	...	303 0 0	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil.	Assessment Circle.	Khalisah, shared or Jagir.	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhdi.			MALQUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government Rakh	Uncultivated	
															Culturable waste	Lately abandoned
				Brought forward												
93				Amirpur ..	299	276	276	257	275	254	825	...	29	...	497	30
94				Bhambri ..	1,300	1,119	782	673	570	501	2,936	...	699	72	1,627	168
95				Missan Kot Bhua	2,081	1,700	1,300	1,307	1,068	1,125	6,269	...	346	690	4,297	27
96				Khlara ..	330	214	108	108	59	59	1,527	...	165	1,010	269	16
97				Rali Lal ..	261	300	185	165	118	118	1,767	...	370	693	664	12
98				Khanwah ..	794	700	500	500	516	498	4,979	...	698	1,676	2,148	45
99				Fatehpur ..	2,041	1,406	906	1,753	1,752	11,399	...	426	1,977	6,969	219	
100				Muhit Shah ..	1,102	537	369	309	387	319	3,994	...	1,481	927	1,382	35
101				Bakir Shah Janubi	1,276	1,057	662	662	532	496	8,557	...	1,263	898	889	60
102				Nusratpur ..	206	230	185	185	155	155	2,048	...	336	471	1,052	9
103				Kundal ..	1,616	1,516	954	954	804	846	3,703	...	970	...	2,050	38
104				Nasti Haji ..	819	519	398	398	219	249	2,666	...	271	...	2,132	15
105				Massan ..	179	168	185	185	110	110	687	...	270	...	332	5
106				Kotia Ohulam Shah	664	697	697	713	702	724	1,905	...	78	...	1,165	48
107				Ghanspur ..	170	300	451	256	196	296	801	...	14	...	488	148
108				Nihalwala ..	220	220	160	160	125	125	221	...	15	...	101	2
109				Danlatpur ..	421	400	284	235	227	213	1,472	...	57	...	1,163	29
110				Kuhar Piran ..	332	300	300	260	236	234	2,121	...	396	574	884	6
111				Kuhar Fakiran ..	226	150	80	70	73	74	234	...	101	...	62	...
112				Kotia Afghan ..	886	652	860	360	418	418	1,017	...	272	...	368	27
113				Nabipur ..	1,219	700	655	535	282	256	1,904	...	114	...	1,529	67
114				Pakka Nalch ..	465	800	726	589	693	610	2,411	...	92	...	1,492	388
115				Theri ..	1,450	1,961	2,759	1,993	1,268	1,286	3,678	...	862	...	1,480	300
116				Gabar Arain ..	1,698	2,272	2,661	2,343	1,413	1,653	2,836	...	663	...	978	144
117				Thattia Jhandiran	1,595	1,877	1,354	1,354	977	1,144	3,082	...	447	...	1,607	157
118				Chak Rao ..	246	267	266	266	111	150	516	...	73	...	327	16
119				Khairpur Sadat ..	3,682	2,685	2,123	2,123	1,273	1,939	4,630	...	191	...	3,115	142
120				Sundar ..	604	815	722	705	654	698	1,117	...	37	...	428	106
121				Shah Wassaya ..	418	490	514	514	787	787	1,561	...	24	...	709	111
122				Malik Arain ..	448	1,202	764	794	784	910	1,917	...	132	...	953	156
123				Ghiri ..	1,556	2,100	1,605	1,338	1,143	1,143	5,306	...	122	1,222	2,898	142
124				Sheikhani ..	961	700	600	708	853	853	3,039	37	74	...	2,142	140
125				Yarewall ..	991	609	413	413	406	429	1,048	...	66	...	558	53
126				Chak Daudwah ..	45	36	33	33	40	39	769	...	10	...	725	9
127				Alipur ..	742	900	906	905	874	820	2,782	...	77	721	1,346	70
128				Bakir Shah Shomali	275	850	660	660	562	467	2,134	...	76	...	1,404	267
Total ..					53,007	48,826	43,337	40,861	34,579	35,147	1,45,861	104	16,835	14,024	80,392	4,791

IV—continued.

18	19	20	21	22	23	24	25	26	27	28	
INCLUDING JAGIR			Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS.		
Cultivated			Total Malguzari land	Total area	Total Malguzari land	Total land under cultivation	Grazing land jama	Date jama		Grand Total	
Irrigated	Unirrigated	Total									
84	188	269	796	0 4 11	0 5 1	0 15 1	29	...	283	0 0 0	Both sailab and canal uncertain. A village of bad land and poor proprietors near the tail of the Khanwah Canal which brings a supply almost as tickle and uncontrollable as sailab.
231	239	470	2,165	0 2 8	0 3 8	1 1 1	35	3 0 0	539	0 0 0	
418	492	910	5,234	0 2 10	0 3 5	1 3 9	195	42 0 0	1,362	0 0 0	Area of the wells small.
54	13	67	382	0 0 7	0 2 8	0 14 1	13	...	72	0 0 0	
101	26	126	802	0 1 1	0 2 10	0 15 0	30	...	146	0 0 0	
360	54	414	2,605	0 1 7	0 3 1	1 3 3	33	1 0 0	532	0 0 0	
270	1,440	1,710	8,897	0 2 6	0 3 1	1 0 4	323	4 0 0	2,079	0 0 0	
116	154	269	1,686	0 1 6	0 3 6	1 4 9	59	1 0 0	409	0 0 0	
280	163	443	1,401	0 2 8	0 5 8	1 1 11	43	...	539	0 0 0	
158	19	177	1,238	0 1 3	0 2 0	0 14 0	48	...	203	0 0 0	
320	315	635	2,733	0 3 8	0 4 11	1 4 11	94	18 0 0	957	0 0 0	
209	39	248	2,395	0 1 6	0 1 5	0 1 0	97	1 0 0	347	0 0 0	
80	...	80	417	0 2 7	0 4 6	1 1 0	15	...	125	0 0 0	
285	334	619	1,832	0 6 1	0 6 4	1 2 9	55	16 0 0	794	0 0 0	
127	24	151	787	0 3 11	0 3 11	1 4 9	15	1 0 0	212	0 0 0	
89	17	106	209	0 8 11	0 9 7	1 2 10	5	...	130	0 0 0	
72	161	223	1,415	0 2 4	0 2 5	0 15 3	36	...	249	0 0 0	
38	22	261	1,151	0 1 9	0 3 3	0 14 4	60	...	294	0 0 0	
32	39	71	133	0 5 1	0 8 11	1 0 8	...	...	74	0 0 0
138	217	350	745	0 6 7	0 8 11	1 3 2	18	20 0 0	456	0 0 0	
105	98	203	1,780	0 2 2	0 2 4	1 4 3	36	37 0 0	323	0 0 0	Area of wells small and abiana fixed low in consequence.
315	64	439	2,319	0 4 1	0 4 2	1 6 3	42	4 0 0	656	0 0 0	Canal irrigation partly failed since measurements in consequence of the closing of the Nungwah, sailab irregular and people very poor, hence rates are fixed low.
690	346	1,036	2,816	0 5 7	0 7 3	1 3 10	80	14 0 0	1,380	0 0 0	Decidedly better than the neighbouring villages, protected from flood, Former jama high. Village required relief, but it was not necessary to go as low as revenue rates jama.
862	288	1,150	2,272	0 9 4	0 10 1	1 6 11	75	31 0 0	1,759	0 0 0	
463	408	871	2,636	0 5 11	0 6 11	1 5 0	79	2 0 0	1,225	0 0 0	On the tail of a canal. On the whole better than other villages of this circle. Relief required. Former jama high but it was not necessary to go as low as revenue rates.
45	54	99	442	0 4 8	0 5 6	1 8 3	15	...	165	0 0 0	Do. Do.
228	953	1,181	4,439	0 4 8	0 4 9	1 2 2	213	61 0 0	1,613	0 0 0	I did not go as low as revenue rates because the former jama was high and the rates fixed gave the relief that was required.
282	264	546	1,080	0 9 10	0 10 2	1 4 2	48	35 0 0	771	0 0 0	Soil superior and gets sailab from the Chenab so I fixed the sailab rate of the Bet Chenab Circle.
178	539	717	1,537	0 8 10	0 8 2	1 1 7	74	7 0 0	863	0 0 0	
208	468	676	1,785	0 7 7	0 8 2	1 5 5	80	97 0 0	1,087	0 0 0	
351	655	986	3,956	0 3 5	0 4 7	1 2 6	124	126 0 0	1,403	0 0 0	Village is in two chaks; soil of western chak very inferior. Soil inferior. Bapar and people generally poor.
324	322	646	2,928	0 4 5	0 4 8	1 5 2	175	430 0 0	1,458	0 0 0	
80	301	381	992	0 6 6	0 6 11	1 2 0	18	7 0 0	454	0 0 0	
25	25	50	759	0 0 10	0 0 10	8 11	25	...	64	0 0 0	
536	32	568	1,984	0 4 9	0 6 7	1 7 1	64	69 0 0	953	0 0 0	
353	34	387	2,068	0 3 6	0 3 7	1 3 4	60	40 0 0	567	0 0 0	
14,276	14,942	39,218	1,14,401	0 8 10	0 4 11	1 8 3	3,925	2,593 2 0	41,665	2 0 0	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil. Assessment Circle Khalisah, shared or Jagir Serial Number				Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minkhat			MALGOUZARI	
			1st Settlement		2nd Settlement	3rd Settlement	Lakhira]					Banen	Government Rakh	Uncultivated		
														Culturable waste	Lately aban- doned	
	129	Chak Kasch Pak ...		63	65	63	63	180	120	436	...	18	...	286	16	
	130	Ber Band ...		1,476	1,461	1,893	1,903	2,927	2,474	5,705	14	254	...	1,921	1,520	
	131	Bilawala ...		614	908	711	726	1,382	1,112	4,671	5	305	738	2,313	321	
	132	Kalru Chit ...		223	335	223	223	341	290	634	...	35	...	312	48	
	133	Chak Kalru Chit ...		185	328	217	217	335	300	608	...	50	...	246	76	
ALIPUR TAHSIL. CHAHU NAHRI. KHALISAH.	134	Kotla Sultan Shah		487	503	360	360	1,053	645	2,673	...	56	...	1,161	719	
	135	Rukanwalli ...		171	581	425	425	819	531	1,353	...	93	...	973	61	
	136	Kallarwalli ...		773	1,260	850	850	2,680	1,700	5,331	...	212	...	2,772	484	
	137	Sheekh Ali ...		253	314	261	261	362	362	839	...	32	...	492	71	
	138	Makwal ...		557	780	780	780	1,246	976	2,663	28	132	...	1,105	532	
	139	Shahr Sultan ...		2,077	2,532	2,345	2,246	3,402	3,135	8,008	...	697	...	3,639	1,164	
	140	Kotla Gamun ...		852	782	832	832	1,727	1,248	3,973	9	592	...	880	1,260	
		Carried over ...														

ALIPUR TAHSIL.
CHAHNI NAHRI.
KHALISAH.

IV—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR			Assessment per acre on				Add to column 11 Grazing and date assessment			REMARKS.
Cultivated			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands Jama	Date Jama	Grand total	
Irrigated	Unirrigated	Total								
116	...	116	418	0 4 5 0	4 7 1	0 7	24	...	144 0 0	Canal supply irregular. People in mid- dling circumstances and could not bear a greater increase than that proposed which is a fraction less than 100 per cent.
1,996	...	1,996	5,487	0 6 11 0	7 3 1	3 10	180	2 7 0	2,656 7 0	I did not consider it safe to enhance the jama more than I have pro- posed. At measurements the culti- vation had fallen off and though it had since improved, there is no guarantee for the prosperity of the village continuing until canals are on a better footing.
896	93	999	3,623	0 3 10 0	4 11 1	2 0	105	42 0 0	1,260 0 0	The village had just suffered from a flood. Some proprietors poor. I did not think it safe to enhance more than the proposed jama which is an increase of 53 per cent. on the old jama.
239	...	39	660	0 7 3 0	7 9 1	3 4	20	...	310 0 0	Similar to No. 130. People poor. The proposed increase is as high as is safe.
236	...	236	558	0 7 10 0	8 7 1	4 4	26	...	326 0 0	The village had suffered from in- sufficient canal supply up to 1874 and had since improved, but there was no guarantee that its prosper- ity which depended on canal supply would continue. I assessed as high as I considered safe.
737	...	737	2,617	0 3 10 0	3 11 0	14 0	50	...	695 0 0	The proposed jama is nearly double the former jama and as high as was safe though the village is decidedly prosperous.
386	332	718	1,780	0 4 7 0	4 10 0	11 10	30	...	561 0 0	A poor village. The Indus finds its way through the Dhands and does a great deal of damage. Inferior crops grown. People poor and land bad. It was impossible to assess higher.
1,599	261	1,860	5,119	0 5 1 0	5 4 0	14 8	200	...	1,000 0 0	Though this village has improved much, it could not bear more than double its present jama.
214	...	244	807	0 6 11 0	7 2 1	7 9	13	90 0 0	395 0 0	Soll inferior Draman. The majority of the people are poor and in debt. Village suffered from a flood in 1878.
863	...	863	2,502	0 5 10 0	6 3 1	2 0	40	2 0 0	1,017 0 0	
2,482	26	2,508	7,311	0 6 3 0	6 10 1	4 0	192	329 0 0	3,856 0 0	Village is on the tail of a canal and until lately got an insufficient sup- ply of canal water. There is no guarantee that the present prosper- ity will last. Under the circum- stances I could not assess higher.
1,232	...	1,232	3,572	0 5 0 0	5 11 1	0 2	139	3 7 0	1,361 7 0	Had suffered much from deficient canal supply and there is no certainty that the supply will remain good. It was not safe to assess higher. The proposed jama is a fraction under Rs. 50 per cent. higher than last jama.

APPENDIX

[illegible]

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grazing and date assessment.			REMARKS.
Cultivated.			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands jama	Date jama	Grand Total	
Irrigated	Unirrigated	Total								
168	..	168	772	0 3 6	0 4 2	1 3 8	24	..	224 0 0	I could not go as high as revenue rates because (1) the increase would have been too large and sudden, (2) the canal supply though improved is still precarious.
1,784	14	1,798	5,288	0 5 1	0 6 4	1 3 0	140	..	2,275 0 0	The soil is Draman and poor. The majority of owners are badly off. Though the village has improved it could not bear a greater increase.
595	..	595	2,204	0 5 0	0 5 6	1 4 8	64	13 0 0	829 0 0	Village injured by flood. Part of the village high and does not get properly irrigated, while the low-lying lands get flooded. Majority of proprietors poor. No increase possible.
1,740	..	1,749	6,158	0 5 0	0 5 0	1 3 0	176	3 0 0	2,256 0 0	The soil is similar to that of 142 but slightly better. West of the village injured by a flood and could not bear an increase up to revenue rates.
598	1,057	1,655	3,338	0 7 4	0 8 6	1 1 1	100	..	1,867 0 0	Village reduced from deficient canal supply which has improved during last two years. Proprietors poor and in debt. A flood did damage in 1878. The village can bear no more than the increase proposed.
705	18	723	1,296	0 8 5	0 10 1	1 2 1	46	3 0 0	867 0 0	This village was so reduced that it was impossible to raise the jama to revenue rates. It had suffered from a flood. Lands badly cultivated. Tenants not to be had. Majority of owners poor.
128	16	144	376	0 1 7	0 4 3	0 11 1	5	2 0 0	107 0 0	An inferior village. Its high lands get insufficient canal supply, its low lands get flooded. Some proprietors have absconded. Soil inferior Draman.
580	108	688	2,382	0 8 2	0 3 4	0 0 5	75	..	575 0 0	Soil sandy and poor. People badly off and in debt. Crops inferior. Though the present jama is low, it cannot be increased.
720	..	720	2,265	0 4 2	0 4 7	0 14 5	62	1 0 0	713 0 0	Though the village requires relief it is not necessary to go so low as revenue rates for the village is decidedly above the average and has been paying a higher jama.
1,040	..	1,040	1,244	0 4 8	0 5 10	1 10 2	8	10 0 0	1,718 0 0	Very similar to the last. A superior village in bad circumstances.
900	..	900	996	1 5 6	1 8 0	1 10 8	4	4 0 0	1,508 0 0	Very similar to the two last villages. The relief given is ample.
1,192	..	1,192	2,012	0 13 3	0 14 4	1 8 2	33	30 0 0	1,863 0 0	Canal supply deficient. Village much injured by the bursting of the Kot Ratta Band. Soil rapar. Jama could not have been increased up to revenue rates.
651	81	682	1,871	0 8 4	0 6 10	1 2 9	60	7 0 0	861 0 0	A superior village growing sugarcane largely, close to the town of Jatol. Slight relief required but it is not necessary to go as low as revenue rates.
980	..	980	1,477	1 3 1	1 4 7	2 8 0	22	15 0 0	1,937 0 0	

Name of Tahsil				5	6	7	8	9	10	11	12	13	14	15	16	17
Assessment Circle Khalisah shared or Jagir Serial No.				Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhdi,			MALGOZARI	
1st Settlement			2nd Settlement			Uncultivated										
1st Settlement			2nd Settlement			Culturable waste						Lately aban- doned				
Brought forward																
155 Komar Ghaziani ..				1,693	897	1,097	1,097	855	980	933	..	110	..	169	63	
156 Daulat Wahi ...				1,425	1,224	1,234	1,234	1,096	1,134	1,264	.	40	..	317	67	
157 Vidad ...				2,012	1,809	1,874	1,874	1,763	1,874	1,943	..	118	..	540	138	
158 Sabaeewala ...				3,130	2,041	2,436	2,436	1,807	2,170	2,311	1	396	..	636	43	
159 Jahanpur				3,456	3,200	3,091	3,091	2,740	3,091	1,847	..	286	..	82	10	
160 Shahbazpur ..				1,131	1,521	1,588	1,588	1,894	1,750	5,145	..	692	..	2,078	994	
161 Vains ..				315	790	804	804	844	804	4,173	..	1,454	548	864	668	
162 Basti Arif ..				683	1,077	1,013	1,013	1,065	1,134	6,337	..	292	1,068	3,628	372	
163 Jhalarin ..				747	1,431	1,441	1,441	2,031	1,630	5,773	..	872	..	2,746	665	
164 Phullan ..				1,623	2,000	2,016	2,016	1,470	1,670	1,919	..	108	...	468	341	
165 Hamsewali ..				173	280	168	168	244	168	7,334	..	13	6,441	636	84	
Carried over ..																

IV—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grazing and date assessment.			REMARKS.
Cultivated.			Total Malsuarsi lands	Total area	Total Malsuarsi lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
Irrigated	Unirrigated	Total								
528	48	591	828	1 9 0	1 3 1	1 10 6	18	20 0 0	1,018 0 0	Lies just south of the town of Jatol. Slight relief required but not necessary to go as low as revenue rates.
652	172	824	1,208	0 14 6	0 15 0	1 6 0	30	2 0 0	1,166 0 0	Close to the last village to which it is slightly inferior.
1,143	..	1,143	1,825	0 15 8	1 0 5	1 10 3	27	9 10 0	1,910 10 0	A superior village close to Jatol. Present jama maintained though above revenue rates.
1,198	37	1,235	1,914	0 15 1	1 2 2	1 12 2	51	38 0 0	2,259 0 0	Like all the villages about Jatol. Labaewala requires some relief but there is no need to go as low as the revenue rate jama, because the village is superior, favorably situated and has improved since in measurements.
1,569	..	1,569	1,661	1 10 10	1 12 9	1 15 7	20	157 0 0	3,268 0 0	This is the best village in the Alipur Tahsil in every respect.
1,381	..	1,381	4,453	0 5 5	0 6 3	1 4 3	100	6 0 0	1,856 0 0	Soil poor and requires long rest after a crop. No greater increase possible.
647	2	649	2,171	0 3 1	0 5 1	1 3 10	40	1 0 0	845 0 0	Like Shahbazpur in its soil but the canal supply is bad and people are poor and in debt. No increase possible.
1,145	22	1,167	5,067	0 3 0	0 3 10	1 0 4	70	2 0 0	1,266 0 0	Very like the two last villages in every respect though highly assessed; it will not bear an increase up to revenue rates.
1,486	4	1,490	4,901	0 4 6	0 5 4	1 1 6	100	9 0 0	1,739 0 0	Similar to the last three villages which are situated in the sand of land in the centre of the Doab. Increase up to revenue rates is not possible.
1,002	..	1,002	1,811	0 12 11	0 14 9	1 10 8	32	61 0 0	1,763 0 0	A superior village adjoining Jahanpur No. 159 and similar to it. It has suffered from bad canal supply and relief is necessary but there is no need to go as low as revenue rates.
160	..	160	880	0 0 4	0 3 1	1 0 9	20	3 0 0	191 0 0	Exactly like 160 to 163. High, sandy, poor soil, canal supply deficient. People mostly poor.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil.				Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhdi			MALGUZARI	
Assessment Circle.					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government Rakh	Uncultivated	
Khalisah shared or Jagir.															Culturable waste	Lately abandoned
Serial No.																
				Brought forward												
166				Yaki Wali ...	1,470	1,451	1,174	1,174	1,287	1,287	3,446	...	201	...	1,595	446
167				Piru Wali ...	1,823	2,829	1,941	1,941	1,768	1,941	2,636	...	836	...	403	190
168				Makwal Hader ...	1,557	2,220	1,932	1,930	2,392	2,392	2,607	...	165	...	349	360
169				Mutafarka ...	882	1,300	1,099	1,099	1,470	1,200	2,789	...	155	...	1,496	228
170				Banda Shah ...	1,028	1,022	1,042	1,048	1,187	1,187	1,081	...	92	...	154	116
171				Ali Wali ...	2,863	3,168	3,064	3,064	2,444	2,650	7,562	...	1,995	2,220	1,498	266
172				Jag Mal ...	540	951	1,008	1,006	795	900	2,271	...	28	413	1,203	19
173				Ghahoon ...	4,920	5,500	5,040	5,063	4,394	5,063	9,105	6	1,086	...	4,238	894
174				Bet Nabi Shah ...	2,120	2,250	1,402	1,402	1,204	1,464	1,445	...	106	...	172	326
175				Tibbi Arain ...	1,653	1,653	1,620	1,620	1,557	1,600	1,745	...	154	...	410	156
176				Khanpur Bhani ...	623	851	831	831	1,113	981	2,185	...	471	...	482	447
Total				...	57,806-4-0	67,439	61,940	61,893	69,541	66,657	1,48,400	62	15,089	11,918	55,005	17,518
Grand Total				...	1,73,371-3-9	1,67,307-15-0	1,49,741-15-0	1,49,601-11-2	1,53,174	1,50,385	5,67,875	166	84,919	56,086	2,73,518	31,574

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS.
Cultivated			Total Malgusari lands	Total area	Total Malgusari lands	Total land under cultivation	Grazing lands jama	Date jamá	Grand Total	
Irrigated	Unirrigated	Total.								
904 1,201	...	904 1,201	3,245 1,800	0 6 0 0 11 9	0 6 4 1 1 2	1 6 9 9 10	94 24	16 0 0 56 0 0	1,397 0 0 2,021 0 0	A superior village. No change required though the jama is above revenue rates.
1,633	...	1,633	2,842	0 14 10	0 15 10	1 6 9	28	28 0 0	2,378 0 0	Similar to Yaki Wahi No. 166.
911	...	911	2,634	0 6 11	0 7 3	1 5 1	69	167 0 0	1,436 0 0	Except the well close to the village the soil is rapar and kalar of inferior description. Cultivation and number of wells decreased.
719 1,687	...	719 1,693	989 3,347	1 1 7 0 5 7	1 3 4 12 8	1 10 5 1 10 7	11 140	52 0 0 22 0 0	1,250 0 0 2,312 0 0	A village above the average but requiring relief. Still there is no need to go as low as revenue rates.
597	1	598	1,320	0 6 4	0 7 11	1 8 1	60	5 0 0	965 0 0	Similar to Ali Wahi No. 171.
2,874	8	2,882	8,014	0 8 11	0 10 11	1 12 1	205	177 0 0	5,445 0 0	Much above the average and very favorably situated as regards markets.
781	...	781	1,339	1 0 2	1 6 1	14 0	41	12 0 0	1,520 0 0	Has improved very much since measurements.
1,016	...	1,016	1,591	0 14 8	0 1 1	9 2	23	57 0 0	1,680 0 0	Improved since measurements.
826	...	826	1,714	0 7 4	0 9 2	1 3 0	30	2 0 0	1,013 0 0	Has suffered from bad canal supply and has not yet recovered. Soil sandy and poor.
46,520	2,273	48,798	1,21,321	0 7 2	0 8 10	1 5 9	3,065	1,384 8 0	71,106 8 0	
71,652	49,660	1,21,312	4,26,704	0 4 7	0 5 8	1 3 10	14,420	4,334 2 0	1,69,139 2 0	

APPENDIX

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IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre or			Add to column 11 Grazing and date assessment.			REMARKS.
cultivated.			Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under Cultivation.	Grazing land Jama.	Date Jama.	Grand Total.	
Irrigated	Unirrigated	Total								
...	578	578	2,447	0 2 0	0 3 2	0 14 0	84	...	590	An exceedingly good Bet village but much exposed to river action, assessment slightly above revenue rates.
...	440	440	1,948	0 1 9	0 2 11	0 12 0	31	...	892	A Bet village of medium quality. Present rate on sailaba land is Rs. 0-11-11 per acre. I have raised it to annas 13 per acre.
126	764	890	4,185	0 2 1	0 4 0	0 14 4	100	..	893	Exactly the same as preceding.
11	782	763	8,791	0 1 5	0 2 10	0 14 2	110	...	784	A good Bet village but much exposed to the river and the quality of its land varies much in consequence. I have fixed 14 annas as the rate for sailaba lands and Rs. 6 per well and jhalur.
...	339	339	2,439	0 0 0	0 1 8	0 12 0	93	...	847	Land poor and exhausted and unusually full of weeds. The sailaba rate has hitherto been Rs 0-9-11 have raised it to 12 annas.
...	180	180	1,578	0 0 8	0 1 6	0 13 0	54	...	200	A good village at present but very much exposed to river action and quality of the soil consequently variable. I have assessed at revenue rates.
614	2,017	2,631	4,676	0 7 5	0 7 9	0 14 0	70	107	2,479	This is one of the villages which has suffered most from the erection of the Sanawan embankment. I have fixed the rate for sailaba land at 12 annas per acre, and abiana Rs. 6 per well and jhalur.
465	850	1,315	3,164	0 6 0	0 6 0	0 15 6	73	12	1,357	The eastern part injured by water driven back from the Sanawan embankment. The western part gets sailaba direct from the river and is good. I have assessed at revenue rates.
312	985	1,297	3,135	0 4 3	0 6 0	0 14 6	81	8	1,263	Village injured by back water from the embankment. I have assessed at revenue rates.
..	125	125	602	0 2 1	0 2 6	0 12 0	11	...	105	Land good but proprietors in reduced circumstances because the village has been infarm. Present sailaba rate Rs. 0-9-11. I have raised to 12 annas.
15	86	101	506	0 0 5	0 2 9	0 13 11	18	...	106	A Bet village of medium quality. I have assessed at revenue rates.
255	390	645	803	0 7 0	0 12 6	0 16 8	...	..	630	A Bet village much exposed to floods and erosion. Present sailaba rate annas 11 is maintained. Abiana Rs. 6 per well and jhalur.
38	304	342	900	0 1 5	0 5 7	0 13 9	28	...	844	A superior Bet village. Sailaba rate fixed at annas 15 per acre. Abiana Rs. 6 per well and Rs. 3 per jhalur. Average area per well 14 acres, average area per jhalur 6 acres only.
573	775	1,348	2,821	0 2 10	0 7 0	0 14 8	64	5	1,302	An inferior Bet village intersected by four branches of the river. People poor and in debt, sailaba rate fixed at Rs. 0-12-6. Abiana per well and jhalur Rs. 6.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil.	Assessment Circle.	Khalisa share or Jagir	Serial Number.	Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the revenue rate of	Proposed assessment.	Total area.	Minkhat.			MALGUZARI	
					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhiraj.	Banen.	Government rath.	Uncultivated	
															Culturable waste.	Lately abandoned.
				Brought forward												
	15	Bet Angra	..	1,000	1,500	1,441	1,127	1,076	1,079	4,142	..	2,435	..	483	14	
	16	Dandowala	...	1,100	314	1,163	1,128	1,337	1,409	4,752	..	246	952	1,943	67	
	17	Esanwala	...	...	61	629	587	519	503	14,535	...	1,038	7,376	5,021	8	
	18	Sojhalwadi	...	...	...	8	180	202	224	2,247	...	330	...	1,638	52	
	19	Kalor	...	...	...	157	187	182	196	2,246	...	1,389	...	631	2	
	20	Bet Ramya	...	627	518	541	465	637	620	4,472	...	142	1,378	2,118	96	
	21	Dibbi Shah	...	2,175	507	863	792	1,153	1,225	4,040	...	176	..	2,665	4	
	22	Bet Zahni	...	924	520	659	652	768	768	1,964	..	41	...	1,168	53	
	23	Bet Sohni	...	1,680	372	462	480	1,095	1,238	4,418	...	125	743	2,383	19	
	24	Kundarwadi	...	...	...	45	66	49	49	244	...	23	...	169	6	
	25	Chanwala	...	1,392	400	919	764	1,325	1,325	4,597	...	218	...	2,939	46	
	26	Khawaswala	..	...	...	43	65	28	28	347	...	312	...	...	1	
	27	Malanawala	...	584	117	268	284	591	672	2,181	...	60	...	1,464	4	
	28	Bet Utera	...	364	114	191	157	334	333	2,804	...	705	..	1,584	16	
	29	Gadi Sandila	...	...	...	123	128	143	143	445	...	3	...	263	3	
	30	Jubjha	...	...	..	6	6	10	10	17	..	..	...	5	...	
	31	Drabi	...	...	...	51	65	86	93	2,105	...	1,789	..	200	...	
	32	(Mukwal Khurd)	...	...	...	240	228	229	246	1,010	...	128	...	1,499	9	
				Carried over	...											

SANAWAN TAHSIL.

BET.

KHALISA.

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grazing and date assessment.			REMARKS.
Cultivated.			Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing land Jama.	Date Jama.	Grand Total.	
Irrigated.	Unirrigated.	Total.								
437	773	1,210	1,707	0 4 20	10 10 1	0-14-3	22	12 8 0	1,113-8-0	Village divided into two parts. One high out of the reach of floods and gets a scanty supply of canal water. The other low and subject to floods. Revenue rates generally followed. Jhalars have large areas in this village, abiana per Jhalal Rs. 7.
601	943	1,544	3,554	0 4 9	0 6 4	0 14 7	87	11 0 0	1,507	A Bet village of medium quality, area of Jhalars and wells above the average, sailaba rate fixed at 13 annas per acre. Abiana per well and Jhalal Rs. 7.
119	473	59	5,623	0 0 8	0 1 5	1 0 0	226	..	819	A superior Bet village. Sailaba rate fixed at 15 annas per acre. Abiana Rs. 6 per well and Jhalal.
96	131	22	1,917	0 1 7	0 1 10	0 15 9	74	...	298	A very good Bet village; 15 annas per acre fixed for sailaba land. Abiana Rs. 6 per well and Jhalal.
...	224	22	857	0 1 6	0 8 8	0 14 0	28	...	224	A good Bet village; 14 annas per acre fixed for sailaba land. No wells or Jhalars at present.
466	272	73	2,952	0 3 9	0 5 0	1 3 11	95	8 0 0	1,023	A very good Bet village. Sailaba rate 15 annas per acre and abiana Rs. 6 per well and Jhalal.
679	474	1,15	3,864	0 4 10	0 5 1	1 1 0	120	8 0 0	1,353	A good Bet village. Area of wells and Jhalars average. 14 annas fixed per acre for sailaba land and abiana Rs. 6 per well and Jhalal.
414	288	70	1,923	0 5 9	0 6 5	1 1 6	66	12 0 0	846	A bad village with poor land; 13 annas fixed as the rate for sailaba land and Rs. 6 for each well and Jhalal as abiana.
770	378	1,14	3,550	0 4 6	0 5 6	1 1 3	134	16 0 0	1,388	A very good village; 15 annas fixed for sailaba land per acre. Abiana per well and Jhalal Rs. 6.
32	14	4	211	0 3 3	0 3 9	1 1 0	7	...	66	A mere sailaba plot. Assessed at revenue rates.
386	1,008	1,39	4,379	0 4 7	0 4 10	0 15 3	40	21 0 0	1,386	A Bet village of medium quality. Assessed at revenue rates.
...	34	34	35	0 1 3	0 12 10	0 13 2	...	...	28	A mere sailaba plot. Assessed at revenue rates.
237	416	65	2,121	0 4 11	0 5 1	1 1 0	65	8 0 0	745	A very good Bet village; 15 annas fixed as the rate for sailaba land per acre, abiana Rs. 6 per well and Jhalal.
196	105	306	2,099	0 2 0	0 2 8	1 2 8	85	5 0 0	443	A good Bet village; 14 annas per acre fixed as the rate for sailaba cultivation, abiana Rs. 6 per well and Jhalal.
...	176	176	442	0 5 2	0 5 2	0 13 0	12	..	155	A good Bet village but unusually exposed to river action. Assessed at revenue rates.
..	12	12	17	0 9 6	0 9 6	0 13 4	...	..	10	A mere sailaba plot. Assessed at revenue rates.
...	106	106	306	0 0 9	0 4 11	0 14 0	5	..	98	A good Bet village; 14 annas per acre fixed for the sailaba rate.
18	256	274	1,782	0 2 1	0 2 3	0 14 4	67	...	313	An exceedingly good Bet village but very much exposed to river action. Assessed at 14 annas per acre for sailaba land.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil Assessment Circle Khalisah shared of Jagir Serial No.				Village.	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment.	Total area	Minhat.			MALGUZARI	
			1st Settlement		2nd Settlement	3rd Settlement	Lakhiraj					Banen	Government rakh	Culturable waste	Lately aban- doned	
Brought forward																
83	Usman Shah	...	...	...	12	33	57	57	188	...	4	...	114	...		
34	Usman Rid	..	...	250	326	312	316	316	1,085	...	88	...	696	20		
35	Pandhan	..	...	...	...	...	...	...	294	...	291	...	3	...		
36	Bhutti Naitla	..	...	...	...	...	...	...	1,665	...	708	967	...	...
37	Kutra	...	...	...	...	...	...	...	375	...	375	...	...	...
	Tibba	...	...	...	2,542	2,580	2,110	2,110	4,916	...	1,037	...	1,534	280		
	Hinjrai	...	...	...	3,141	2,886	2,892	2,892	12,414	...	2,198	...	6,472	702		
	Patal	...	...	...	1,169	1,169	1,358	1,358	3,627	...	154	...	1,867	119		
	Dairadimpanah	...	...	...	437	437	266	266	512	...	17	...	198	49		
	Farhar Ghahli	...	...	...	2,428	2,363	2,730	2,730	7,145	...	620	...	3,121	428		
	Bhubbar	...	...	...	495	495	499	465	992	...	37	...	399	8		
	Jannun	...	...	...	2,073	2,068	1,545	1,545	4,610	...	944	...	1,649	418		
	Khai Chak 2nd	...	...	...	553	553	474	474	1,165	...	32	...	588	58		
	Jhaanpur	...	...	...	433	433	324	324	486	...	7	...	170	14		
Total				...	16,377	7,219	30,221	29,788	32,239	32,945	1,55,859	...	39,744	13,728	64,180	3,516
																Name of village.
																Tibba ..
																Hinjrai ..
																Patal ..

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grazing and date assessment.			REMARKS.
Cultivated.			Total Malgusari lands	Total area	Total Malgusari lands	Total land undoy cultivation	Grazing land Jama	Date Jama	Grand Total	
Irrigated,	Unirrigated	Total								
...	70	70	184 0 4	10 0	4 11 0	13 0	...	...	57	A good Bet village but very much exposed to the river, 13 annas fixed per acre for sailaba land.
109	222	331	1,047 0	4 8 0	4 10 0	15 3	31	8	350	A medium Bet village. Assessed at revenue rates.
...	...	...	3	...	...	...	...	...	...
...	
...	
1,265	800	265	3,879 0	6 10 0	8 8 1	0 4	...	...	2,110	This and the following eight villages which have no numbers attached are those parts of inland villages which lie west of the Sanawan embankment. They have all suffered more or less from the erection of the embankment and remissions averaging Rs. 5,600 a year have had to be granted since the embankment was made.
1,069	1,973	3,042	10,216 0	3 9 0	4 8 0	15 8	...	...	2,802	
279	1,208	1,487	3,479 0	6 0 0	6 2 0	14 7	...	...	1,358	
135	118	253	435 0	8 4 0	8 7 1	0 10	...	...	266	
838	2,138	2,916	6,525 0	6 1 0	6 8 0	14 8	...	...	2,730	
110	438	548	955 0	7 2 0	7 6 0	13 0	...	...	465	
752	847	1,599	3,666 0	5 4 0	6 9 0	15 6	...	...	1,545	
235	192	427	1,133 0	6 6 0	6 8 0	15 7	...	...	474	
188	107	295	470 0	10 8 0	10 10 1	1 7	...	...	324	

The following statement shows the rates fixed for each village:—

Sailaba rate per acre.	Well and Jhalar rate per well and Jhalar	Name of village.	Sailaba rate per acre.	Well and Jhalar rate per well and Jhalar.	Name of village.	Sailaba rate per acre.	Well and Jhalar rate per well and Jhalar.
0 13 0 6	0 0	Dahradinpanah	0 13 0 6	0 0	Jannun ..	0 13 0	6 0 0
0 13 0 6	0 0	Parhar Gharbi	0 13 0 6	0 0	Khal Chak 2	0 13 0	6 0 0
0 13 0 6	0 0	Bhubbar ...	0 12 0 6	0 0	Thsanpur ...	0 13 0	6 0 0
11,899	22,783	34,682	1,02,387	0 3 6 0	5 2 0	15 2	1,984
236	8 0	35,165	8 0				

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah shared or Jagir	Serial No.	Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the revenue rates of	Proposed assessment.	Total area	Minhâl.			MALGUZARÎ	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Bacon	Government rakh.	Uncultivated	
															Culturable waste.	Lately abandoned.
				Tibba ..	11,100	11,100	5,686	5,686	4,332	5,129	26,023	15	4,563	13,768	3,619	477
				39 Hinjrai ..	8,500	8,500	2,353	2,353	2,292	2,338	6,802	..	288	..	4,228	326
				40 Junnun ..	2,600	1,900	195	195	237	237	316	..	32	..	66	21
				41 Khal Chak 1st ..	3,900	3,100	524	524	592	506	1,079	..	23	..	536	84
				42 Do. 2nd ..	..	..	499	499	422	499	499	..	66	..	39	87
				43 Do. 3rd ..	..	..	897	897	1,065	1,000	1,202	..	68	..	266	76
				44 Dairadinpanah ..	2,800	2,750	2,056	2,056	1,625	1,999	2,390	..	147	..	759	337
				45 Patul Kot Adu ..	3,200	3,200	2,257	2,257	2,959	2,780	15,853	..	416	7,825	4,541	332
				46 Chowdhry ..	3,300	3,400	3,280	3,280	3,232	3,280	4,078	..	249	..	1,233	166
				47 Bhubbar ..	883	883	261	261	298	264	633	..	49	..	314	48
				48 Paribar Gharbi ..	8,000	6,600	1,855	1,855	2,058	2,058	2,130	..	183	..	298	110
				49 Kotlah ..	..	..	578	578	731	731	1,827	..	48	..	1,081	150
				50 Halah ..	1,100	1,100	1,216	1,136	1,422	1,355	3,167	2	275	..	1,586	228
				51 Sadhari ..	600	600	584	584	942	769	1,134	..	68	..	353	22
				52 Radho ..	526	526	709	709	737	709	1,322	..	84	..	632	37
				53 Manân ..	1,500	1,500	1,641	1,641	1,593	1,641	1,562	..	106	..	254	22
				Carried over ...												

SANAWAN TAHSIL
 PAKKA CHAHÎ NAHRI
 KHALISAH

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grazing and date assessment.			REMARKS.
Cultivated			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land Jama	Date Jama	Grand total.	
Irrigated	Unirrigated	Total								
3,581	..	3,581	7,677	0 3 2	0 10 10	1 6 11	232	50	5,411	This village had suffered much from floods and some wells had been permanently injured by the soma caused by the Sanawan embankment. Hence a reduction was necessary but as the village had been paying a high jama it was not necessary to go so low as the revenue rates jama. The present jama is suitable and has been retained.
1,601 197	356 ..	1,960 197	6,514 284	0 5 6 12 0 0	0 5 9 13 5 1	3 3 3 3	500 100	16 25	2,869 572	The eastern part of this village was formerly injured by floods but is now protected by the embankment, and can stand increase up to revenue rates.
432	..	432	1,056	0 8 4	0 9 0	1 5 0	12	7	585	Canal supply good. Proprietors well off. Village improved since measurements and protected by the embankment.
307 776	.. 16	307 792	433 1,134	1 0 0 13 4 0	0 1 2 14 1 1	5 10 0 4 3	28 12	117 127	644 1,159	Ditto. Ditto. Village could stand an increase. Some wells had been injured by soma which prevented my going as high as revenue rates.
1,147	..	1,147	2,243	0 13 5	0 14 3	1 7 0	43	76	2,117	Canal supply good. Village improved since measurements, protected by embankment. A few wells suffered from soma which required relief.
2,225	14	2,239	7,112	0 2 11	0 6 3	1 3 10	288	234	3,362	The village can bear an increase. It is protected by the embankment, and canal supply has improved. I could not go as high as revenue rates because (1) the eastern part of the village is in the Thal and is sandy and poor; (2) the proprietors could not bear a larger increase.
2,354	76	2,430	3,829	0 13 5	0 14 3	1 5 7	28	410	3,718	Former jama badly distributed, the wells getting canal water assessed lower than those not assessed by canal water. No increase possible. A new distribution will remedy inequalities.
222	..	222	584	0 6 8	0 7 6	1 3 0	32	66	262	Land poor and salt. Village injured by floods but now protected by the Band. No increase possible. Present jama maintained.
1,499	40	1,539	1,947	0 15 6	0 11 1	1 5 5	154	244	2,456	Protected by the Band and improving, can bear a slight increase of the present jama up to the revenue rates jama.
548	..	548	1,779	0 6 5	0 6 7	1 5 4	49	22	802	Village improving. Proprietors well-to-do. Village will stand an increase up to revenue rates.
1,076	..	1,076	2,890	0 6 10	0 7 6	1 4 5	80	23	1,458	Village improving and can stand a small increase. Canal irrigation very bad till lately.
691	..	691	1,066	0 10 10	0 11 6	1 1 10	32	44	815	Canal supply bad till lately. People in middling circumstances. Can bear an increase but not as high as revenue rates.
549	..	549	1,238	0 8 7	0 9 2	1 4 8	29	8	746	Former jama unequally distributed being very heavy on wells unassisted by canal water. People poor and in debt. No increase possible. Present jama maintained.
1,181	..	1,181	1,457	1 0 9	1 2 0	1 6 3	22	130	1,793	Present jama slightly higher than revenue rate jama but no need to reduce it. No increase possible. Much land sold and mortgaged and the village injured by floods in 1874 but now protected by the Band.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil Assessment Circle.	Khalisah shared or Jagir	Serial No.	Village.	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhat			MALGUZARI		
				1st Settlement	2nd Settlement	3rd Settlement					Lakhraaj	Banen	Government rakh	uncultivated		
														Culturable waste	Lately abandoned	
Brought forward																
54			Sheikh Umar ..	3,800	3,800	1,972	1,972	1,770	1,972	2,066	..	186	..		268	49
55			Det Rug .. ..	..	..	333	333	442	392	447	..	21	..		62	3
56			Ladha Langar ..	1,600	1,500	1,741	1,741	1,677	1,550	1,623	..	213	..		119	56
57			Kahiri	800	800	682	682	716	630	1,074	8	66	..		317	124
58			Shadi Khan ..	1,350	1,233	625	625	557	520	800	..	29	..		311	55
59			Daya Chokha ..	5,250	4,850	5,190	5,190	5,510	5,000	7,777	13	935	..		2,290	203
60			Thutti Hasan Ali ..	900	790	568	560	538	568	1,139	..	103	..		597	2
61			Pirzadah	657	582	453	453	472	500	598	..	28	..		183	39
62			Thutti Hamza ..	2,300	2,300	1,730	1,716	1,843	1,843	2,693	..	152	..		1,081	19
63			Det Mahesar ..	425	380	340	340	361	361	743	..	38	..		390	39
64			Jhandir Dureja Gharbi	1,890	1,800	627	627	731	731	1,015	..	39	..		395	40
65			Dogar Kulasrah ..	1,450	1,450	1,535	1,535	1,535	1,660	3,760	..	369	..		2,181	122
66			Tibbi Nizam ..	861	861	824	824	739	739	1,310	..	148	..		533	49
67			Gurmani	4,450	4,750	3,256	3,245	3,223	3,256	6,865	..	262	..		3,798	217
68			Vairar Abrind ..	1,098	998	733	733	535	500	803	2	46	..		274	92
69			Khar Janubi ..	..	..	398	398	241	290	230	..	16	..		29	8
*carried over				..												

SAWAN TAHSIL,
PARKA CHAHI NAHRI,
KHALISAH.

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grating and date assessment			REMARKS.
Cultivated			Total Malignari lands	Total area	Total Malignari lands	Total land under cultivation	Grazing land Jama	Date Jama	Grand Total	
Irrigated	Unirrigated	Total								
1,148	415	1,563	1,880	0 15 5	1 0 9	1 4 8	8	54	2,032	People well-to-do, land good; present assessment low. People have let land go out of cultivation and neglected to put up Jahars in order to get a light assessment. Former jama maintained.
831	80	861	426	0 14 0	0 14 9	1 1 5	..	5	397	Former jama very light, but the village had suffered from failure of canal water and could not bear an increase to revenue rates. People poor except the Koreshis.
1,240	..	1,240	1,416	0 15 3	1 1 6	1 4 0	10	200	1,760	Has suffered very much from bad canal management. The canal area fell from 1,238 acres at measurements to 371 acres last year. Decrease absolutely necessary.
529	..	529	1,000	0 9 5	0 10 1	1 3 1	16	73	719	Has suffered from bad canal supply which is still deficient. People poor. Wells minutely sub-divided because the people will not go to get a living elsewhere. Decrease necessary.
405	..	405	771	0 10 5	0 10 9	1 4 7	14	35	569	Deficient canal supply. Village suffered from floods. One-third of the cultivated area mortgaged, and people heavily in debt besides. Relief necessary.
4,147	90	4,237	6,829	0 10 3	0 11 9	1 2 11	104	175	5,279	Canal supply deficient till lately but now improved. Village much reduced in consequence. Mortgages and sales numerous and people heavily in debt besides. Some relief necessary. A redistribution of the jama much required.
371	66	437	1,084	0 8 0	0 8 9	1 4 10	27	32	627	Canal irrigation good. A well-to-do village. Village can stand an increase up to the revenue rate jama.
348	..	348	570	0 13 4	0 14 0	1 7 0	8	30	538	
1,355	86	1,441	2,541	0 10 11	0 11 7	1 4 6	75	140	2,658	
268	9	277	705	0 7 10	0 8 2	1 4 10	18	5	394	
541	..	541	976	0 11 6	0 12 0	1 5 7	36	62	829	Cultivation and number of wells increased. Government rakh containing culturable land released. Village can bear increase up to revenue rate jama.
1,138	..	1,138	3,391	0 7 1	0 7 10	1 7 4	96	84	1,840	A good village, cultivated area and wells increased, canal supply deficient till lately. Jama proposed gives Rs. 36 per canal assisted well with an average area of 24 acres. Village can stand the increase proposed.
585	..	585	1,167	0 9 0	0 10 2	1 4 3	24	5	768	Village has suffered from unequal distribution of canal water. Cultivated and fallow area decreased. Mortgages and sales many. Relief necessary.
2,452	166	2,618	6,633	0 7 7	0 7 10	1 2 11	171	89	3,516	Has also suffered from unequal distribution of canal water but improved since settlement survey. Former jama maintained.
389	..	389	753	0 9 11	0 10 7	1 4 7	12	36	548	This village has suffered more than others from unequal distribution of canal water, cultivated and fallow area and number of wells decreased. One-fourth of the cultivated area mortgaged. Relief necessary.
180	..	180	214	1 4 2	1 5 8	1 9 9	..	20	310	Situated like Valrar Abriand on the tail of the Chuan Canal and has similarly suffered by unequal distribution of canal water. This village was the most highly assessed in the Tahsil and was well off until the canal management became so bad. Relief necessary.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah, shared or Jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimate demand at the revenue rates of	Proposed assessment	Total area	Minkhat			MALGOZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	Uncultivated	
															Culturable waste	Lately abandoned
				Brought forward ..												
				70 Thatta Gurmiani	4,400	4,100	3,290	3,812	3,288	3,503	8,103	..	355	..	4,726	170
				71 Rao Bela Gharbi ..	1,750	1,500	976	976	723	800	1,380	..	77	..	559	46
				72 Ran ..	484	444	282	258	213	282	1,121	..	41	..	758	56
				73 Chokamwar ..	152	152	136	136	208	208	889	..	38	..	619	81
				74 Munsa Ram ..	748	746	810	810	854	854	1,284	143	57	..	405	29
				75 Khulhawar ..	2,500	2,660	1,877	1,844	2,194	2,002	4,241	..	187	..	2,257	196
				76 Rid ..	2,300	2,345	2,512	2,512	2,322	2,512	3,394	..	601	..	1,001	83
				77 Khokhar ..	900	900	1,201	1,201	1,557	1,400	4,771	..	172	..	3,259	169
				78 Jungla ..	450	400	250	250	208	229	233	..	25	..	30	26
				79 Rao Bela Sharhi ..	..	..	381	381	316	370	742	..	29	..	397	68
				80 Vairar Sipra ..	350	350	810	800	799	700	1,508	..	61	..	801	65
				81 Gujrat ..	1,700	1,550	1,882	1,380	1,657	1,657	4,415	14	183	..	2,506	255
				82 Munsa Ram Sandila ..	580	582	2,051	2,051	1,870	2,051	2,260	16	115	..	537	168
				83 Haji Shah ..	250	300	249	249	248	220	686	..	58	..	374	46
				84 Zor :	610	610	489	489	462	441	631	..	58	..	173	64
				85 Bhatti ..	660	660	449	449	397	397	656	..	54	..	287	10
				Carried over	..											

SANAWAN TAHSIL.
PARNA CHAH NAHRI.
KHALISAH.

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grating and date assessment.			REMARKS.
Cultivated			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land Jama.	Date jama	Grand Total	
Irrigated	Unirrigated	Total								
2,284	570	2,854	7,750	6 11 0	7 8 1	3 8	350	48	3,901	A very improving village and can bear an increase. It is this village that gets more than its share of canal water and which has impoverished Vairar, Abirind Khar Janub and Rao Bela Gharbi.
512	142	654	1,259	9 7 0	10 2 1	3 7	12	56	868	Has suffered much from unequal distribution of canal water. Cultivated area decreased. Sugar-cane cultivation abandoned and indigo decreased, since canal supply became bad. People very poor. Relief very necessary.
100	171	271	1,080	4 0 0	4 8 1	0 8	34	3	319	There is no reason for reducing the present jama, though it is above revenue rates. The Pathan and Kirars proprietors are well off. The Rans badly off but they are unusually lazy and helpless.
137	64	201	851	3 9 0	3 11 1	0 7	35	4	247	Jama raised to revenue rates jama, cannot go higher as canal and sadaba supply is precarious.
650	...	650	1,084	0 10 7	0 12 7	5 0	32	88	974	Worse than Mansa Ram the last village, but it can stand an increase
1,601	..	1,601	4,054	7 7 0	7 11 1	4 0	102	80	2,184	
1,709	..	1,709	2,793	0 11 10	0 14 4	1 7	45	45	2,602	Village can pay the present jama though it is above revenue rates. Canal supply has improved lately, a redistribution of the jama is badly wanted and will give relief.
1,174	..	1,174	4,602	0 4 8	0 4 11	1 3	100	5	1,503	Village can bear an increase but not up to revenue rates for canal supply is deficient and the village has not received the benefit of recent improvements.
152	..	152	208	0 15 1	0 11 1	7 2	5	4	229	Allowing a reduction of Rs. 30 on the present jama for one well that has fallen in Rs 22. The remainder gives an average jama of Rs. 44 well which is as high as is possible. Little room for improvement.
248	..	248	713	0 6 8	0 8 1	1 4	9	1	320	Canal supply deficient. Land high. Village in bad circumstances revenue collected with difficulty. Cultivated area decreased. Relief necessary.
581	..	581	1,447	0 7 5	0 7 9	1 3	36	3	739	Similarly situated to the last. Number of wells in work decreased. People poor and in debt. Relief necessary.
1,180	277	1,457	4,218	0 6 0	0 6 3	1 2	141	117	1,915	Former jama very light. Can stand an increase up to revenue rates, not higher for much land is mortgaged, and there are long standing funds in the village.
1,411	14	1,425	2,130	0 14 6	0 15 4	1 7	52	75	2,178	No reason to reduce the present jama though it is above revenue rates.
170	38	208	628	0 5 2	0 6 7	1 0	17	8	245	Has suffered from destructive floods followed by complete failure of salub. Cultivation diminished one well almost useless. People very poor. Some relief necessary.
336	..	336	573	0 11 2	0 12 4	5 6	8	6	455	Canal supply deficient. Land high and bad cultivation diminished. Some relief necessary.
305	..	305	602	0 9 8	0 10 7	1 4	5	5	407	Land high and bad. Canal supply deficient. Cultivation and wells decreased. A bad village.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khatulshah, shared or Jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Mushahi			MALGUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	Uncultivated	
															Culturable waste	Lately abandoned
				Brought forward ...												
	86	Nán	..	1,260	1,210	1,024	1,024	1,019	1,024	1,407	..	526	..	125	7	
	87	Nuran Chhajrah	..	100	100	121	121	188	109	821	..	144	..	68	8	
	88	Panwar Janabi	..	..	..	648	648	546	594	1,283	..	89	..	709	34
	89	Douna	..	1,700	1,700	1,559	1,559	1,306	1,416	2,743	..	560	..	1,078	122	
	90	Papa	..	490	400	284	284	261	204	413	..	90	..	115	1	
	91	Drig	..	800	800	691	692	634	691	5,462	..	509	1,071	2,210	187	
	92	Lal Mir	..	1,650	1,355	1,384	1,384	997	1,125	2,025	..	674	..	209	196	
	93	Khera	..	500	300	470	470	411	470	2,077	..	53	..	1,543	96	
	94	Patti Jhandir	..	..	..	666	666	614	600	2,325	..	48	..	1,573	127
	95	Patti Khar	..	..	..	261	259	270	261	7,541	..	26	1,177	6,024	81
	96	Patti Naich	..	..	..	775	763	749	500	8,577	..	14	942	6,875	49
	97	Patti Ghulam Ali Chak Gharbi	..	5,687	6,197	2,066	2,062	1,936	1,665	29,527	..	92	5,065	22,087	331	
				Carried over	...											

SANAWAN TAHSIL.
P. KHA CHAH NAHRI.
KHALIFAH

IV--continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR			Assessment per acre on			Add to column 11 Grating and date assessment			REMARKS.	
Cultivated			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land jma	Date jama		Grand Total
Irrigated	Unirrigated	Total								
749	..	749	881.0	11 7.1	2 8.1	5 10	6	6	1,036	Present jama which is almost the same as the revenue rate jama maintained. No increase possible in consequence of bad canal supply.
101	..	101	177.0	8 5.0	9 11.1	1 4	2	1	113	Cultivated area decreased. Number of wells decreased. Canal supply deficient.
401	..	401	1,144.0	7 0.0	8 4.1	7 8	32	17	643	Canal supply deficient and cultivation decreased. Some relief necessary.
978	..	978	2,183.0	8 2.0	10 4.1	7 2	48	36	1,500	Canal supply bad. Cultivation decreased. Soil rapar and kalur, relief necessary but we need not go as low as the revenue rates jama.
199	..	199	323.0	7 11.0	10 1.1	0 5	5	7	216	Bad canal supply. Cultivation diminished. Soil rapar and salt, and the greater part in the Thal. Mortgages many and people very poor.
585	..	585	2,982.0	2 0.0	3 6.1	3 0	55	5	751	Village almost ruined by failure of the Rajawah canal and the jama had to be reduced in 1875-76 from 894 to 691. I would maintain this though it is above revenue rates. The village had decidedly improved when I saw it last.
856	..	856	1,351.0	8 11.0	13 4.1	5 0	30	24	1,189	Village injured by insufficient canal supply and by a destructive flood in 1874. Mortgages many, wells minutely sub-divided. Cultivated area decreased and 3 well out of work since measurements. Relief necessary, but we need not go as low as the revenue rate jama because part of the village is really in the Pakka Chahi Nahri Circle.
369	16	385	2,024.0	8 7.0	3 9.1	3 6	40	9	519	No reason to reduce the jama though it is above revenue rates. Former jama badly distributed. A new distribution will give all the relief required.
577	..	577	2,277.0	4 2.0	4 3.1	0 8	39	3	642	On the tail of the Sirdar canal; supply always bad and now not improved; cultivated area and number of wells decreased. Soil sandy and poor, relief needed.
233	..	233	6,338.0	0 7.0	0 8.1	1 11	30	..	291	On the tails of the Sardar and Khudadad. Supply always bad and now not improved. No increase possible. I would maintain the present jama which is more than half assets jama but less than revenue rates jama.
697	..	697	7,621.0	1 0.0	1 1.0	11 6	107	2	610	This village is on the tails of the Sardar and Khanpuri canals, and has suffered more than any other from deficient canal supply. Ten wells have become waste since the summary settlement. The village urgently requires relief. It was almost abandoned when I visited it in the cold weather of 1877-78.
1,812	..	1,812	24,170.0	6 11.0	1 1.0	14 8	271	4	1,940	Almost the same as the preceding, village has been ruined by bad canal management, 8 wells have stopped working since measurements. Indigo cultivation almost abandoned. Relief urgently required.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil, Assessment Circle Khailanli, share (or) Jagir Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhd			MALGUZARI				
		1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	Uncultivated				
												Culturable waste	Lately aban- doned			
Brought forward																
98	Salawan ..	2,200	2,200	2,009	2,009	1,641	1,900	2,807	..	423	..	793	134			
99	Jhandir Durega Sharki ..	..	..	1,680	1,680	1,343	1,453	2,719	13	1,000	..	506	27	
100	Khar Sharki ..	..	..	648	648	405	592	1,393	..	450	..	447	58	
101	Bhuryog	900	630	876	876	817	934	2,672	...	377	..	1,465	84			
102	Futin Mal	500	500	229	229	213	200	981	..	163	..	570	60			
103	Hans	200	200	217	212	382	317	1,156	..	190	...	601	33			
104	Panwar Shamali....	3,000	3,195	1,873	1,869	1,859	1,873	3,941	...	325	..	1,897	81			
105	Budh	1,570	1,800	1,601	1,594	1,099	1,239	3,806	...	707	...	1,483	141			
	Total	17,007	17,357	15,446	15,413	13,490	13,820	76,309	13	5,050	9,155	48,322	1,675			

SANAWAN TAHSIL:
THAL CHAHI SHARKI
KHAUSAIL

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS
Cultivated			Total Malgusari lands	Total area	Total Malgusari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
Irrigated	Unirrigated	Total								
1,457	..	1,457	3,381	0 10 7 0 12 9 1 4 10	40	46	1,988	Canal supply (the Sardar) as bad as ever. People in debt, cultivated area decreased. Relief is necessary, though there is no need to go as low as revenue rates, because the village is partly within and partly without the Thal.		
1,174	..	1,174	1,706	0 8 7 0 8 7 1 3 10	32	7	1,312	Exactly similar to Sanawan except that it is nearer the tails of the canals and therefore worse off. A number of Indigo rats out of work from failure of canal water.		
438	..	438	963	0 7 4 0 10 0 1 5 7	22	3	617	Irrigated by a branch of the Sardar. Supply insufficient. Cultivation and number of wells decreased. Village in a depressed condition. Reduction necessary but we need not go so low as the revenue rates jama.		
746	..	746	2,235	0 5 7 0 6 6 1 4 0	67	6	1,067	Irrigated by the Sardar and Chakar Khan canals, the former very bad, the latter good. People well-to-do Khatri. Jama very light. Can bear a slight increase.		
189	..	189	819	0 3 3 0 3 11 1 0 11	14	..	214	Canal supply very bad. Cultivated area and number of wells decreased. People, though Kirars, very poor and reduced; relief necessary.		
332	..	332	966	0 4 5 0 3 4 0 13 3	25	..	342	An improving village. I could not raise the jama up to revenue rates because (1) canal supply is precarious; (2) land is sandy and poor; (3) the people are in too small a way to stand so large an increase at once.		
1,638	..	1,638	3,616	0 7 7 0 8 3 1 2 4	86	26	1,984	Present jama, though slightly higher than revenue rates, is not higher than I have assessed on similarly situated villages. I have therefore retained it. No increase was possible on account of bad canal supply.		
975	..	975	2,499	0 6 0 0 7 7 1 4 4	45	5	1,289	Canal supply has been very bad, and revenue collected with difficulty. The British proprietors badly off and at feud among themselves. Relief necessary, but we need not go so low as revenue rates. The village has been paying a high jama, and if it gets good canal supply, the crops are excellent.		
12,078	16	12,094	62,091	0 2 11 0 3 6 1 2 3	922	151	14,893			

APPENDIX

[illegible]

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS.
Cultivated			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land jama.	Date jama	Grand Total	
Irrigated	Unirrigated	Total								
19	..	19	465	0 0 8 0 0 8 1 0 10	4	..	24	Consists of two miserable wells in the worst part of the Mundla and Buhli Thal. Area of cultivation at each well below the Thal average		
57	..	57	2,984	0 0 3 0 0 3 0 14 7	29	..	81			
19	..	19	1,351	0 0 3 0 0 3 0 15 2	13	..	31	Consists of two wells. Area of wells below the Thal average. Number of sheep and goats a on which agriculture greatly depends in the Thal is also below the average. Therefore could not increase up to revenue rates.		
216	..	216	13,904	0 0 2 0 0 2 0 13 1	137	..	314	Former jama reduced by Rs. 20 because one well had fallen in. No other change necessary. Area of wells above the average. Sheep and goats abundant.		
71	..	71	2,811	0 0 3 0 0 3 0 11 3	27	..	77	People fairly well off. Area of wells above average. Plenty of sheep and goats. Can safely go up to revenue rates jama.		
96	..	96	3,826	0 0 4 0 0 4 0 11 4	36	..	100	People very poor, no increase possible. Present jama maintained.		
108	..	108	4,236	0 0 6 0 0 6 1 0 6	54	..	185	Area of wells average. Plenty of sheep and goats at each well. Crops good when I visited the village. No need to reduce the former jama to revenue rates.		
94	..	94	4,315	0 0 4 0 0 4 1 1 0	52	..	142	Can easily stand increase up to revenue rates. Area of wells average, 13½ acres. Good flock of sheep and goats at each well.		
359	..	359	11,63	0 0 6 0 0 6 0 14 5	107	..	430	Assessment made at Rs. 17 per well. Village is owned by very industrious Kulachis. A good flock at each well. Area of well above the average, being 19 acres.		
309	..	309	14,363	0 0 2 0 0 3 0 14 6	141	..	421	Poor and people badly off. Average area per well 15 acres. Wells not wholly cultivated. Not necessary to reduce as low as revenue rates, though some relief is necessary.		
1,138	..	1,138	1,05,159	0 0 2 0 0 2 0 15 5	1,037	..	2,193	Composed of three portions, one of which, called Dagar Chaudia, is badly off and requires relief. In this part most of the wells are bitter.		
240	..	240	236	0 0 4 0 12 4 0 14 9	49	..	270	Average area per well 13 acres. Cultivated area and number of wells decreased. Present jama heavy. Wells only partially cultivated and land bad. Number of sheep and goats at each well below average and manure consequently scanty.		
1,091	107	1,198	3,701	0 2 9 0 6 1 1 2 8	62	8	1,470	There is a large bit of this village which is without the Thal and which gets some canal water. I have assessed the extra Thal wells at an average of Rs. 21 and the intra Thal wells at Rs. 18. A superior village; even the intra Thal wells are better than other Thal villages.		
35	..	35	1,605	0 0 4 0 0 4 0 13 9	16	..	46	Land bad even for the Thal. Area of wells below the Thal average; sheep and goats also below the average; a thoroughly bad village.		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah, shared or Jagir	Serial No.	Village.	Highest assessment of			Average demand of last five years	Estimated demand at the Revenue rates of	Proposed assessment	Total area	Minkhat			MALGUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government takh	Uncultivated	
															Culturable waste	Lately abandoned
				Brought forward ..												
				120 Talai Nur Shah ..	320	330	316	305	300	316	21,767	24	4	..	21,358	47
				121 Kahiri Munda ..	130	130	130	130	88	120	5,788	..	17	..	5,633	36
				122 Kat ..	500	500	122	116	76	74	1,244	..	50	529	566	9
				123 Fazibar Sharki ..	..	..	822	820	594	1,043	7,216	..	1,161	3,024	2,002	112
				124 Dogar Kalasrah Munda ..	120	120	120	126	62	70	4,888	..	7	..	4,757	23
				125 Talai Chandhar ..	220	220	278	277	300	288	12,270	..	..	..	11,861	102
				126 Shadi Khan Munda ..	360	360	492	455	397	412	20,692	..	10	..	20,084	175
				127 Mirpur ..	220	220	237	237	240	266	7,608	..	8	..	7,194	43
				128 Vandhar ..	505	505	537	537	450	558	38,896	..	50	26,104	12,051	98
				129 Parihar Munda ..	410	410	506	511	462	506	57,573	..	38	30,970	23,804	149
				130 Patti Sultan Mahmud ..	..	..	679	643	538	752	55,341	..	34	16,139	38,243	10
				131 Patti Ghulam Ali Sharki ..	..	..	41	41	25	28	2,006	..	2	..	2,069	2
				132 Patti Chakar Khan ..	..	..	118	118	75	85	4,203	..	3	..	4,075	37
				Carried over ..												

SASARAN TAHSIL

THAL CHAH.

KHALISAH.

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR.				Assessment per acre on			Add to column 17 Grazing and date assessment			REMARKS
Cultivated			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
Irrigated	Unirrigated	Total								
334	..	334	21,739	0 0 8	0 0 3	0 15 2	214	..	536	No increase possible. Present jama which is slightly above revenue rates, maintained. Owners are industrious—Chandla Beloches.
102	..	102	5,771	0 0 4	0 0 4	1 2 10	56	..	178	Area of wells below the Thal average. Plenty of sheep and goats. One well gone out of gear. People badly off. Relief required but we need not go as low as revenue rates.
67	13	80	655	0 0 11	0 1	10 0 14 10	11	..	86	Cultivated area decreased and wells less by two than before. Cultivated area shown in excess of measurements because an accidental flood got in and some land was cultivated from it.
915	..	915	3,080	0 2 4	0 5 6	1 2 3	20	24	1,087	This, like Ahsanpur, has a piece outside the Thal which gets canal water. This part can bear higher revenue rates than the part in the Thal. The Thal part is bad. The extra Thal part is good and improving. The town of Kot Acha is in this village, it can well bear an increase.
108	..	108	4,881	0 0 3	0 0 3	0 10 10	48	..	118	Three wells out of gear but can be mended. Average area of wells above average. A good flock of sheep and goats at each of the working wells. Wells in work assessed at an average of Rs. 17-0 each. Wells out of work at Rs. 9-8-0 each.
312	..	312	12,265	0 0 4	0 0 4	0 14 6	80	1	369	Water in the wells bitter. People badly off and land poor. Area of wells below average. Could not go above Rs. 12-0 per well.
427	..	427	20,676	0 0 4	0 0 4	0 15 4	139	1	543	One well gets canal water. People with the exception of the Kureshis poor. Present jama high for the Thal.
263	..	263	7,500	0 0 7	0 0 0	0 15 7	72	..	328	Owners fairly well off. Plenty of sheep and goats at each well. Crops very good, when I visited the village. Area of wells above the Thal average.
587	..	587	12,726	0 0 8	0 0 9	0 15 3	121	..	679	Area of wells above the average. Some proprietors very badly off. I assessed this after Patti Sultan Mahmud, which is decidedly superior to it.
612	..	612	26,565	0 0 2	0 0 4	0 13 8	258	..	761	Present jama which is slightly higher than revenue rates jama is maintained.
915	..	915	39,168	0 0 3	0 0 4	0 13 2	272	..	1,021	Wells above the average in area. Sheep and goats plenty, people fairly well off. Revenue collected with ease. Crops very good. Proposed assessment averages Rs. 16 per well.
33	..	33	2,094	0 0 3	0 0 3	0 13 7	6	..	34	Contains only two wells which are inferior to those in the neighbourhood. Sheep and goats at each well few. Present jama high for such bad wells. Proposed jama is at Rs. 14 per well.
88	..	88	4,200	0 0 4	0 0 4	0 15 3	41	..	126	Cultivated area and number of wells have decreased. Average area of each well 14-2 acres, proposed assessment at Rs. 17 per well.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisa shared, or Jagir	Serial No.	Village	Highest Assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhái			MALGUZARI	
					1st Settlement	2nd Settlement	3rd settlement					Lakhiraj	Baran	Government rakh	Culturable waste	Lately abandoned
SARAWAN TAHSIL.	THAL CHAHL.	KHALISAH.	133	Patti Daya Cho- kha ..	..	..	688	627	495	652	13,719	..	54	..	12,553	125
			134	Dhán ..	20	20	8	8	62	62	1,405	..	3	..	1,318	8
				Total ..	7,953	7,770	9,546	9,080	7,951	9,290	4,72,397	28	7,963	1,17,964	3,85,448	1,455
				Grand total ..	1,38,271	1,28,246	1,21,594	1,20,505	1,19,604	1,22,761	8,49,442	253	65,377	1,62,440	5,01,375	12,028
				Grand total of District	5,59,293 9 3	5,41,142 10 6	4,09,661 13 3	5,04,970 4 1	5,24,913	5,24,468	20,09,166	898	2,81,725	3,11,554	9,33,870	61,842

IV.—concluded

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				Assessment per acre on			Add to column 11 Grazing and date assessment			REMARKS.
Cultivated			Total area	Total Malguzari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total		
Irrigated	Unirrigated	Total							Total Malguzari lands	
667	..	667	13,665	0 0 9	0 0 9	15 2	129	1	782	On the tail of those sinners the Rajuwah and Muhammadpuri canals; supply of water bad. People poor and in debt. A good flock of sheep and goats at each well. Proposed assessment is at Rs. 16 per well unassisted, and Rs. 30 per well assisted, by canal water.
81	..	81	1,402	0 0 9	0 0 9	12 3	13	..	75	
9,439	120	9,559	8,46,443	0 0 4	0 0 5	0 15 5	3,239	35	12,504	
82,210	26,559	1,07,769	6,21,172	0 2 4	0 3 2	1 2 2	9,480	3,690 8 0	1,33,351 8 0	
2,90,371	1,18,696	3,99,267	14,14,979	..	..	..	33,388 0 0	19,125 10 0	5,76,881 10 0	

E. O'BRIEN,

Settlement Officer.

APPENDIX No. V

APPENDIX V.

FORM D.

General abstract of area under crops showing productive capacity in the several assessment circles of the Muzaffargarh District.

1	2	3	4	5	6	7	8	9	10	11	12
NAME OF TAHSIL.	Present status.	Crops of the 1st order of value.									
		Indigo.	Sugarcane.	Gur.	Vegetables.	Poppy.	Tobacco.	Safflower.	Red popper.	Cotton (uncleaned.)	Total.
Muzaffar- garh	Area	9,858 0 0	2	3,392 0 0	192	2	362 0 0	9 0 0	32	16,706 0 0	30,555 0 0
	Value of gross produce	2,00,744 11 8	160	1,76,017 4 9	6,310	80	10,952 0 0	86 6 5	1,060	2,99,407 14 7	6,94,118 5 5
Alipur ...	Area	8,111 0 0	...	881 0 0	149	37	412 0 0	61 0 0	101	4,991 0 0	14,743 0 0
	Value of gross produce	1,29,776 0 0	...	48,054 8 8	4,115	1,480	12,020 0 0	214 0 0	3,425	90,596 5 11	2,89,710 14 7
Sanawan	Area	2,861 0 0	...	74 0 0	240	...	201 0 0	...	2	8,014 0 0	11,392 0 0
	Value of gross produce	72,612 6 0	...	6,449 9 4	7,770	...	6,334 6 0	...	43	1,32,828 5 0	2,25,936 10 4
Total	Area	20,830 0 0	2	4,347 0 0	581	39	975 0 0	70 0 0	135	29,714 0 0	66,690 0 0
	Value of gross produce	4,03,133 1 8	160	2,30,521 6 9	18,195	1,560	28,506 6 0	336 6 5	4,527	5,22,832 9 6	12,09,765 14 4

FORM D—continued.

		13	14	15	16	17	18	19	20	21						
		Crops of the 2nd order of value.														
NAME OF TAHSIL.	Present status.	Wheat.		Gram.		Mung.		Mash.		Melon.	Water melon.	Onions.	Til.	Total.		
Muzaffar- garh ...	Area ...	86,824	0 0	4,613	0 0	120	0 0	342	0 0	227	2	80	3,553	0 0	95,761	0 0
	Value of gross produce	11,26,614	4 9	32,902	9 8	1,300	3 5	3,715	14 8	6,460	50	2,575	41,156	14 9	12,14,774	15 3
Alipur ...	Area ...	56,853	0 0	3,962	0 0	103	0 0	8	0 0	...	44	59	404	0 0	61,433	0 0
	Value of gross produce	6,39,993	3 7	25,980	5 2	564	13 1	101	9 5	...	1,290	1,745	4,104	15 6	6,73,779	14 9
Sanawan ...	Area ...	57,820	0 0	4,052	0 0	37	0 0	...	...	...	14	8	124	0 0	62,055	0 0
	Value of gross produce	7,33,374	1 0	36,781	8 6	201	3 0	...	...	...	420	160	1,488	0 0	7,74,924	12 6
Total ...	Area ...	201,497	0 0	12,627	0 0	260	0 0	350	0 0	227	60	147	4,081	0 0	2,19,249	0 0
	Value of gross produce	25,00,481	12 4	97,664	7 4	2,066	3 6	3,817	8 1	6,460	1,760	4,450	46,749	14 3	326,63,479	10 6

FORM D—continued.

		22	23	24	25	26	27	28	29										
		Crops of the 3rd order of value.																	
NAME OF TAHSIL.	Present status.	Barley.		Moth.		Methra.		Jawar.		Bajra.		Shali (Rice).		Coriander.		Carrots.			
{ Muzaffargarh ...}	Area ...	1,638	0	0	2,976	0	0	729	0	0	7,105	0	0	4,761	0	0	4,788	0	0
	Value of gross produce...	16,421	11	5	18,606	8	9	4,197	7	8	57,891	12	10	42,965	2	6	55,295	12	3
{ Alipur ...}	Area ...	8,086	0	0	314	0	0	475	0	0	6,581	0	0	6,882	0	0	5,391	0	0
	Value of gross produce...	64,928	3	3	1,395	8	11	1,470	15	6	46,307	5	11	62,801	15	9	56,747	5	10
{ Samawan ...}	Area ...	1,238	0	0	1,698	0	0	287	0	0	7,131	0	0	6,304	0	0	147	0	0
	Value of gross produce...	13,963	5	10	7,269	8	0	853	8	0	31,329	0	0	32,484	6	0	1,592	8	0
{ Total ...}	Area ...	10,962	0	0	4,988	0	0	1,491	0	0	20,817	0	0	17,947	0	0	10,276	0	0
	Value of gross produce...	95,313	4	6	27,271	9	8	6,521	15	2	1,35,528	2	9	1,38,251	8	3	1,13,635	10	1

FORM D—continued.

		30	31	32	33	34	35	36	37
		<i>Crops of the 3rd order of value.—concluded.</i>							
		<i>Crops of the 4th order of value.</i>							
NAME OF TASHIL.	Present status.	Sarsun.	Garlic.	Sathri.	Bhang.	Mustard.	Total.	Mohri.	Sanwak.
Muzaffargarh	{ Area	43 0 0	...	83 0 0	...	...	22,074 0 0	1,505 0 0	818 0 0
	{ Value of gross produce	521 3 5	...	1,810 14 7	...	...	1,37,720 9 5	7,629 4 11	2,617 9 7
Alipor	{ Area	...	10 0 0	...	4 0 0	370 0 0	28,130 0 0	1,760 0 0	329 0 0
	{ Value of gross produce	...	102 13 8	...	232 13 11	3,288 14 3	2,37,468 7 5	7,822 3 5	1,104 5 4
Sanawan	{ Area	...	...	...	...	6 0 0	16,814 0 0	980 0 0	1,027 0 0
	{ Value of gross produce	...	...	...	...	54 0 0	87,567 3 10	8,697 8 0	3,662 1 4
Total	{ Area	43 0 0	10 0 0	83 0 0	4 0 0	376 0 0	67,018 0 0	4,245 0 0	2,174 0 0
	{ Value of gross produce	521 3 5	102 13 8	1,810 14 7	232 13 11	3,342 14 3	5,32,756 4 8	24,149 0 4	7,384 0 3

FORM D—continued.

		38	39	40	41	42	43	44	45																
		Crops of the 4th order of value—continued.																							
NAME OF TASHUL.	Present status.	Samkha.		China.		Usan.		Turnip.		Peas.		Tobia.		Kuria.		Kangul.									
{ Muzaffargarh ... }	Area	159	0	0	414	0	0	1,570	0	0	5,145	0	0	11,465	0	0	108	0	0	7	0	0	49	0	0
	Value of gross produce...	583	8	0	2,071	11	5	9,567	10	7	40,976	15	6	69,029	1	1	922	15	622	13	1	241	15	7	
{ Alipur ... }	Area	302	0	0	55	0	0	2,054	0	0	1,412	0	0	10,893	0	0	...	...	...	...	...	...	21	0	0
	Value of gross produce...	923	11	6	363	10	3	10,085	13	11	9,157	0	0	46,606	9	7	...	...	...	...	...	...	150	0	0
{ Sanawan ... }	Area	31	0	0	73	0	0	4,921	0	0	5,943	0	0	3,317	0	0	6	0	0	9	0	0	13	0	0
	Value of gross produce...	93	0	0	507	8	0	22,522	14	7	38,448	6	0	12,715	2	3	60	0	0	...	...	...	104	0	0
{ Total ... }	Area	492	0	0	542	0	0	8,545	0	0	12,500	0	0	25,385	0	0	114	0	0	16	0	0	83	0	0
	Value of gross produce...	1,606	3	6	2,942	13	8	42,176	7	1	88,592	5	6	1,19,350	12	11	932	15	622	13	1	495	15	7	

FORM D—concluded.

		46	47	48	49	50	51	
Crops of the 14th order of value.—concluded.								
NAME OF TAHSIL.	Present status.	Nangul.		Linseed.	(Toja, Goli.	TOTAL.	TOTAL AREA UN- DER CROPS.	HALF NET OF ASSETS JAMA.
Muzaffargarh	Area	2 0 0	...	...	...	21,242 0 0	1,69,632 0 0	...
	Value of gross produce	6 6 5	...	...	...	1,24,669 15 8	22,31,283 13 9	3,25,499 0 0
Alipur	Area	187 0 0	...	...	...	16,723 0 0	1,21,029 0 0	...
	Value of gross produce	534 4 7	...	...	...	76,747 10 7	12,77,706 15 4	2,12,931 2 6
Samsan	Area	...	...	1 0 0	286	16,607 0 0	1,06,868 0 0	...
	Value of gross produce	...	...	8 2 0	3,640	90,458 10 2	11,78,887 4 10	1,96,481 3 6
Total	Area	189 0 0	1 0 0	286		54,572 0 0	3,97,529 0 0	...
	Value of gross produce	540 11 0	8 2 0	3,640		2,91,876 4 5	46,87,878 1 11	7,34,911 5 0

